TECHNOLOGY DEPARTMENT

Member Associated Business Papers, Inc.

The Newspaper of the Industry

Member Audit Bureau of Circulations.

AIR CONDITIONING AND REFRIGERATION News

Issued Every Monday at 450 W. Fort St., Detroit 26, Mich.

November 22, 1948

Vol. 55, No. 12, Serial No. 1027
Established 1920.

PUBLIC LIBRARY
NOV 24 1948
DETROIT

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1948, by Business News Publishing Co.

INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
Strictly Confidential
We Aren't Self-Satisfied
What Eastman's Editorial Research Is and Does
Readers Cooperate Gladly
Interpreting the Suggestions
Year After Year
What This Means To YOU
And What Does the Advertiser Get Out of It?
They're Conscientious
Who Is This Bird?

Story of the Week

Carl Nevinger, the intrepid one-man-gang who produces air conditioning units down in Greenville, Ill., knocks himself out trying to corral the sheet steel he needs to keep his production lines running smoothly.

So does many another "small businessman" manufacturer in these times.

Last week Carl sank into a Pullman club-car chair, after an unsuccessful quest for steel in Pittsburgh. He sighed, openly and heavily.

"You're not kidding, brother—that's how I feel" responded the man seated next to him—who turned out to be a "steel expediter" for a large corporation.

Strictly Confidential

You will probably never see an Eastman Editorial Research report, nor ever hear any facts or figures quoted from one.

This is because these reports are *strictly confidential* to editors and publishers to whom they are rendered. Under the rules of the Eastman Research Organization, no part of these reports can be used directly or indirectly in selling, nor can they be quoted.

And yet, through the very fact that they are 100% critical and designed only to help editors improve and enhance the readership of their publications and service to subscribers, no research activity in America is of greater value and significance to subscribers and advertisers.

More readers, better reading, and greater reader loyalty—which are the direct products and the only products of the Eastman Research service—cannot help but mean greater value for the subscriber and the advertiser.

AIR CONDITIONING & REFRIGERATION NEWS employs the superstrict Eastman Research Organization to double-check our usefulness to subscribers. This service is expensive, but we feel justified in buying it because the Eastman interviewers tell us candidly what "samples" of our subscribers like and don't like about the NEWS.

Although these Eastman queriers can't possibly interview more than a small percentage in any given year, given time enough, they'll get around to *YOU*.

We Aren't Self-Satisfied

There are editors and editors.

Some are sure that everything they do is right. There are others who are equally sure that there is nothing they could ever do that could not be improved upon.

Therefore the Eastman Reader Research service is rarely employed by any publication whose editors are self-satisfied.

Eastman's first requirement in taking on a new client is evidence of its editors' open-mindedness, of their earnest desire to do the best possible job for their readers, and their ability and initiative to do that job when the way is pointed out.

AIR CONDITIONING & REFRIGERATION
(Concluded on Page 6, Column 1)

Contractor-Union Collusion Charged In 'Test Cases' Involving Right To Work

LOS ANGELES — Legal proceedings aimed against two types of union-contractor collusion in the construction industry have been filed with the National Labor Relations Board here. Both types of collusion are deemed to be "against the public interest" in the complaints.

One concerns plumbing, the other electrical work. Both moves are based on contracts that employer associations have made with AFL building trades unions. The contracts, it is charged, bind association members to give work only to members of the union with which the deal was made. This collusion is attacked as violating a Federal statute which outlaws discrimination against a non-union worker.

The plumbing case is based on an unfair labor practice charge filed against the Master Plumbers Association, Silverberg Plumbing Co., and Plumbers Union 78 by Mrs. Edwin Selvin as labor relations counsel for Jack Biberman, a worker.

Similarly, the electrical case is based on an unfair labor practice charge filed against the Electrical Contractors Association of Los Angeles, Korb Electric Co., and International Brotherhood of Electrical Workers by Joseph M. Westphal (Mrs. Selvin again is the counsel).

Biberman stated in an affidavit that he was employed on a pipe threading machine for many years (17 with the General Motors Corp.), that he got a similar job with Silverberg, but was refused admission to the union, and was discharged on its demand made under the contract between the union and association of which Silverberg was a member. Biberman stated also, that his employer wished to keep him on his job.

Westphal some time ago filed his unfair labor practice charge against the IBEW, but amended it to include the Electrical Contractors Association as a respondent.

He, too, asserted that he got a job from which his employer unwillingly was forced to discharge him by the union under the alleged association-union deal which permits the hiring of union members only.

He charged that the union would not admit him to membership, and would not give him a work permit, although he had been an electrician for many years.

Collusion between contractors and
(Concluded on Back Page, Column 1)

Norge To Use 'Quiz' In Product Sessions

DETROIT—Radio quiz show techniques will be employed by the norge division of Borg-Warner Corp. to increase wholesalesman awareness of features of the company's new 1949 appliance line, at sales conventions in late November and early December, says H. L. Clary, director of sales.

Every distributor salesman who attends the convention meetings will be eligible for prizes to be distributed among winners of question and answer periods which will follow sales training sessions. The three conventions will be held in Coronado, Calif., Nov. 29 and 30, and Dec. 1; Edgewater Park, Miss., Dec. 8, 9, and 10, and Miami Beach, Fla., Dec. 15, 16, and 17.

At the start of each two-day sales training meeting, distributor salesmen will be given a specific amount of
(Concluded on Page 25, Column 1)

Clark Elected NEMA President

ATLANTIC CITY, N. J. — B. W. Clark, vice president of Westinghouse Electric Corp., has been elected president of the National Electrical Manufacturers Association for the coming year.

Clark was elected at the 22nd annual meeting of the organization here last week.

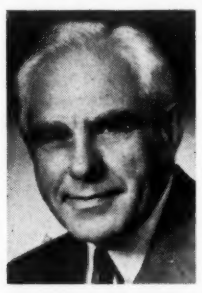
E. E. Potter, vice president of General Electric Co. was named a vice president of Nema and was re-elected to the board of directors for a three-year term.

Also among the nine members re-elected to the board were: P. M. Bratten, general sales manager, Frigidaire Div., General Motors Corp.; C. T. Lawson, vice president in charge of sales, Kelvinator Div., Nash-Kelvinator Corp.; and Max McGraw, president, McGraw Electric Co.

Elected a new member of the board was Raymond C. Cosgrove, executive vice president and a director of Avco Mfg. Co.

ASRE Luncheon Will Feature Shreve Talk

NEW YORK CITY — Earl O. Shreve, president of the United States Chamber of Commerce and recently retired vice president of the General Electric Co., will be the principal speaker at the Welcome Luncheon of the American Society of Refrigerating Engineers at the Hotel Statler in Washington, D. C. on Dec. 6, the society has announced.



Earl O. Shreve

The luncheon is the opening social event of the 44th annual meeting of the society. The three-day conclave, Dec. 6-8, will include presentation of 14 technical papers, a domestic refrigerator forum, the election of officers for the coming year, and a program of social activities.

Shreve, as president of the chamber of commerce, has traveled extensively in this country, Canada, and Europe. He joined General Electric in 1904 and remained with the company until this year. He was vice president in charge of appalatus sales.
(Concluded on Back Page, Column 1)

32 Dealers Offer Free Turkey, Fixin's with Freezer Purchase

DETROIT — A complete Thanksgiving dinner for eight is being offered by General Electric dealers here with every purchase of an 8-cu. ft. G-E home freezer.

A recent full-page newspaper advertisement run by the General Electric Supply Co. here and cooperated in by 32 metropolitan Detroit dealers announced the offer last week.

Headlined "Let Us Provide Your Thanksgiving Dinner," the advertisement notes the features of the freezer and then states: "Here's What You Get." The Thanksgiving dinner includes a 12-lb. turkey, a package of turkey dressing, two packages of mixed vegetables, a package of cranberries, two packages of Cloverleaf rolls, a mince pie, and an apple pie.

"Everything you need," the advertisement reads, "Frozen packed—ready to prepare.

The freezer is priced at $330.

Separate 2-in. boxed listings for each dealer surround the distributor's copy. Each box repeats the main slogan "Let Us Provide Your Thanksgiving Dinner!" Address and telephone number of each cooperating dealer are given.

2 Philco 8.1-Cu. Ft. Models Bow Early For Christmas Push

PHILADELPHIA — Two new 1949 Philco refrigerators, models 892 and 893, were introduced last week by Philco Corp. and are now being shipped to distributors and dealers.

Both models have a storage capacity of 8.1 cu. ft. Model 893 has 16.2 sq. ft. of shelf space; model 892, 16 sq. ft.

Walter H. Eichelberger, sales manager of the Philco refrigeration division, stated that Philco is deviating from its long-standing policy of presenting all new models at the annual January refrigeration sales-convention and is placing the 1949 models on the market at the present time "to take care of the unprecedented Christmas demand for Philco refrigerators."

Model 893 is described as a moist-cold refrigerator "suited to all climates and seasons." Summer-winter control, developed in the Philco research laboratories, is said to bring operating efficiency to its highest peak.

Balanced humidity will now be a standard feature of all advanced de-
(Concluded on Back Page, Column 4)

'Freon-11' Prices Cut 2-5% by Kinetic

WILMINGTON, Del. — Kinetic Chemicals, Inc., has announced a reduction in prices for "Freon-11" florinated refrigerant ranging from nearly 2% to a little less than 5%, depending upon container sizes.

The new prices will be effective on shipments made on or after Nov. 26.

"Freon-11" is used principally in industrial refrigerating equipment, in central-station air conditioning systems and as the propellant for insecticides in aerosol bombs.

Hy Jarvis Wins Defrost Patent Suit

LOS ANGELES—York Corp.'s attempt to have the Supreme Court of the United States review and reverse the decision of the Ninth Circuit Court of Appeal's decision upholding the validity of the Refrigeration Engineering, Inc., McAdam patent on water defrost coils ended when the Supreme Court denied York's petition for writ of certiorari.

The court's refusal to review the case was handed down on Nov. 8. The decision of the Ninth Circuit Court of Appeals upholding the validity and finding of infringement by York is now final.

NERA Changes Name To Clearly Indicate Field

CHICAGO—The board of directors of the National Electrical Retailers Association last week authorized changing the name of the organization to the National Appliance and Radio Dealers Association, Clif Simpson, managing director, has announced.

Simpson explained, "For some time leaders within the association have been of the opinion our association needed a name that would be more clearly indicative of the business firms we represent.

"Oftentimes in the past it has required considerable explanation to make clear what we meant by 'electrical retailer.' It is thought that the new name will be clearly understood to mean that we represent appliance and radio dealers."

Stiffer Selling, No Price Drop Seen for 1949

Southern Sales Conference Hears Truesdell Stress Stepped-Up Sales Training

ATLANTA — A lot more concentrated sales effort, not enough refrigerators, probably higher prices, and an increasingly important farm market are in the cards for the major appliance industry next year, according to industry manufacturers who addressed the annual sales conference of the Southeastern Electric Exchange here last week.

Leonard C. Truesdell, vice president of marketing for Hotpoint, Inc., told the 300 southeastern utility executives and a number of manufacturer and distributor representatives who attended the conference that one of the greatest single problems confronting the appliance industry is training dealer organizations to market the greatly expanded volume of products in the face of stiffening competition.

The problem now, he added, is not further expansion but refining and developing to the fullest extent the present dealer structures. A successful training program, he said, must be originated by the manufacturer and endorsed and supported by the distributor and dealer to reach the retail market level.

Truesdell also noted that where manufacturers could once stimulate sales by reducing prices, they are now unable to cut prices appreciably even in the face of waning sales. While prices will eventually decline they will not return to prewar levels.

He found one answer to this problem. The manufacturer can turn out new products and add more product features to increase the obsolescence of the appliances now in consumers' hands.

T. J. Newcomb, sales manager of the electric appliance division, Westinghouse Electric Corp., could not foresee any reduction in prices next year.

Pointing out that manufacturers are having a "terrific struggle" to hold prices where they are, he said, "if there is another round of wage increases next spring, the battle is definitely lost."

He doubted that there was any
(Concluded on Page 25, Column 3)

Gibson Co. Buys Interest In Phoenix-Apollo Steel

GREENVILLE, Mich.—The Gibson Refrigerator Co. has announced its purchase of the Standard Pressed Steel Co.'s entire interest in the Phoenix-Apollo Steel Co. of Phoenixville, Pa.

This latest move in the Gibson company's expansion program was taken, according to Frank S. Gibson, Jr., secretary and treasurer, to insure a further increase in sheet steel tonnage for production of Gibson refrigerators, ranges, and home freezers.

Gibson was recently named chairman of the board of the Phoenix-Apollo Steel Co., which has plants in both Phoenixville and Apollo, Pa.

In addition to its activity to assure adequate supplies of sheet steel, the Gibson company has taken other expansion steps in the last year.

Some months ago Gibson bought a manufacturing plant at Belding, Mich., formerly owned by the Murray Corp., erected another new building to add to its manufacturing facilities at Belding, and work has now started on a new warehouse at Gibson's Greenville plants.

Salesmen So 'Sold' on Automatic Washers They Clinch Deals Quickly

ATLANTA — Salesmen of the Georgia Power Co. first sold themselves on automatic washers, then they proceeded to sell their customers. Results reported for September and October: 319 automatic washers sold compared to 180 conventional.

W. B. Farnsworth, manager of the utility's merchandise division, insisted that this record was established without the aid of any intensive campaign. But the salesmen have sold themselves so thoroughly on automatics that, he said, "they are selling conventional type washers only where they can't sell automatic."

Georgia Power handles Westinghouse Laundromats and the ABC conventional washers. There has been no shortage of either make, Farnsworth declared.

Tuve Heads Advisory Committee for 1949 ASHVE Exposition In Chicago, Jan. 24-28

NEW YORK CITY—G. L. Tuve, president of the American Society of Heating & Ventilating Engineers, has been appointed chairman of the Advisory committee for the Ninth International Heating & Ventilating Exposition, which is to be held in the International Amphitheater, Chicago, Jan. 24 to 28.

Membership of the advisory committee in addition to Chairman Tuve, includes the following:

A. E. Stacey, Jr., first vice president, ASHVE; Lester T. Avery, second vice president, ASHVE; M. W. Bishop, council member, ASHVE; L. N. Hunter, chairman, committee on research, ASHVE; H. M. Hart, past president, ASHVE; E. Vernon Hill, past president, ASHVE; John Howatt, past president, ASHVE; Samuel R. Lewis, past president, ASHVE; C. M. Burnam, Jr., president, Illinois chapter, ASHVE.

W. A. Kuechenburg, general chairman, 55th annual meeting; J. H. Milliken, vice chairman; F. P. Keeney; E. N. McDonnell; Oliver J. Prentice; K. C. Richmond.

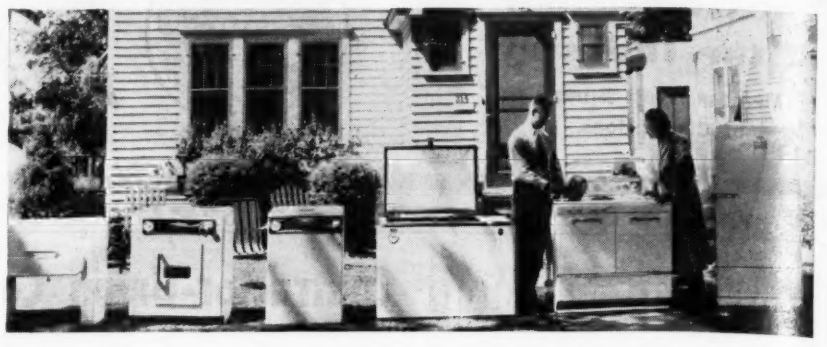
R. H. Bolt, president elect, Acoustical Society of America; George S. Jones, Jr., president, Air Conditioning & Refrigerating Association; Howard W. Pound, Air Filter Institute; Douglas W. Orr, president, American Institute of Architects; A. J. Schwantes, president, American Society of Agricultural Engineers.

B. H. Jennings, vice president, American Society of Refrigerating Engineers; Dr. R. C. Johnson, president, Anthracite Institute; J. B. Morrow, president, Bituminous Coal Research; Thomas L. Eagan, president, Heating, Piping & Air Conditioning Contractors National Association.

R. E. Ferry, general manager, Institute of Boiler & Radiator Manufacturers; J. V. Jones, president, Insulation Board Institute; R. A. Wasson, president, National Association of Fan Manufacturers; J. Z. Hollmann, president, National Mineral Wool Association; Atlee Wise, president, National Warm Air Heating & Air Conditioning Association.

R. S. Bohn, president, Oil-Heat Institute of America; R. A. Locke, president, Steel Boiler Institute; Claude A. Potts, president, Stoker Manufacturers Association.

She Only Asked About Some Washer Parts



Les Herried is shown with Mrs. Henry Witt and the six Frigidaire appliances she purchased after inquiring about some parts for her conventional washer. Herried is a salesman for Modern Electric Co., Frigidaire dealer in Vermillion, South Dakota.

Paul Mills To Head G-E's Remote Equipment Div. At Bloomfield Works

BLOOMFIELD, N. J.—Paul E. Mills has been appointed manager of manufacturing of the remote equipment division at the Bloomfield Works of the General Electric Co., it has been announced by A. W. Wennerstrom, manager of manufacturing for the air conditioning department. In addition to his new appointment Mills will continue as assistant to Wennerstrom.

Mills joined General Electric in 1925 at Schenectady and was placed on rotational assignments under the Business Training Program. He continued in the General Office at Schnectady until 1932 when he was appointed traveling auditor. He spent the greater part of the period from 1932-39 as secretary-treasurer and director for eight transportation companies which were G-E affiliates.

Returning to the company at Bloomfield in 1939, he was appointed Department Accountant and general assistant to the air conditioning department comptroller. In 1948 he was appointed assistant to the manager of manufacturing.

Mills, originally from Rutland, Vt., is a member of the Roseland Civic Association. He belongs to the National Association of Cost Accountants and the Bloomfield Association of G-E Engineers.

Hospital Conditioners Clean Air for Pollen, Dust Victims

ELMIRA, N. Y.—Two air conditioning units have been installed at St. Joseph's hospital with funds donated by Elmira Lodge of Elks.

The equipment is especially designed for the comfort of persons who are sensitive to pollen, dust, and other particles in the air.

The dust and pollen is automatically filtered from the air as it enters the room. The equipment is 90% effective, officials said.

Stewart-Warner Buys Heating Research Corp. In Expansion Move

CHICAGO — Purchase of physical assets, patents, and trademarks of Heating Research Corp., Anderson, Ind., by Stewart-Warner Corp., has been announced by James S. Knowlson, Stewart-Warner president and board chairman.

Heating Research Corp., headed by Allan W. Lundstrum, produces the Saf-Aire Gas Heater, a convection type space heater which burns manufactured, natural, or bottled gas, Knowlson said. More than five thousand units have been produced and installed during the last two heating seasons, he said. Lundstrum, inventor of the device, H. W. Milner, sales head of Heating Research, and other key personnel have joined the Stewart-Warner organization.

Production, marketing, and other operations of the newly acquired business will be integrated with the South Wind Division of Stewart-Warner at Indianapolis, Knowlson indicated.

Acquisition of the Saf-Aire heater represents further expansion of Stewart-Warner's stake in the field of heating equipment, Knowlson pointed out. A modulated, circulating gas-burning home heater, several models of gasoline-burning car and truck heaters; aircraft heaters and anticing equipment, and, other heating equipment are produced under the "South Wind" brand name at Indianapolis.

Murray Fights To Regain Dept. Store Locals

NEW YORK CITY—A battle to regain control of 30,000 union employes of a number of large department stores here was launched recently by Philip Murray, president of the Congress of Industrial Organizations.

Locals in these stores, led by left-wing officers who have refused to sign non-Communist affidavits, bolted the Retail, Wholesale, and Department Store Union, CIO, several months ago and have waged a virtual civil war with right-wing elements for control of union members ever since.

Murray, at the end of October, intervened into this situation and ordered the leaders of several large unions here to mobilize their money and manpower for an educational and organizational drive at once.

He said that he would name a representative of the national organization to conduct the drive.

Texas Association Incorporates

DALLAS, Tex.—Fifty-year charter of incorporation has been granted Texas Appliance & Air Conditioning Association. Incorporators: B. B. Baird, Raymond H. Dear, and Frank G. Atwater.

Refrigeration, Freezing Will Be Topics At First Session of Women's Roundtable

NEW YORK CITY—Several prominent refrigeration industry figures will address the opening session of the Electrical Women's Round Table 1949 Workshop for electrical living here on Jan. 26, Grace Deibig, chairman of the organization's education committee, has announced.

Covering refrigeration and freezing, the session will be an all day affair. It will be held in the auditorium at 570 Lexington Ave. here.

K. G. Roe, a member of the refrigeration division, General Electric Co., will open the workshop at 9:30 a.m. with a discussion of the fundamentals of refrigeration.

Dr. C. R. Fellers, head of the department of food technology, University of Massachusetts, will follow with a discourse on the problems of food preservation, application of refrigeration to prevent spoilage, and storage times of fruits and vegetables in freezers and refrigerators.

Dr. Donald K. Tressler, of Tressler Associates, will discuss packaging problems of foods for freezing. Rhea Shields of Deepfreeze division, Motor Products Corp. will give a demonstration of the freezer in use.

The evening session will start at 7:30 p.m. with a summary of the day's meeting by Dr. Martha Johnson, manager of the food research and appliance testing laboratories, General Electric Co. and co-chairman of the session.

Dan A. Packard, sales manager, Kelvinator division, Nash-Kelvinator Corp., will then speak on merchandising freezers and refrigerators. Time will be allowed at the end of the program for questions from the audience.

Dr. Nancy Masterman of Cornell university will be the other co-chairman.

FAST EASY WAY TO KEEP STOCKS COMPLETE

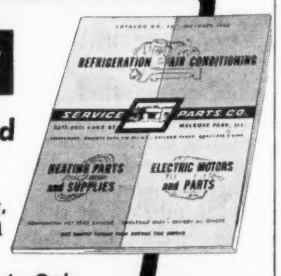
Order From Our Great New Value-Filled CATALOG

Your best source for all Refrigeration, Air Conditioning, Heating Parts and Supplies. Write on your letterhead for copy. Orders filled same day received.

THE SUPPLY HOUSE THAT SERVICE BUILT • Wholesale Only

SERVICE SP PARTS CO.

2511-2611 LAKE STREET MELROSE PARK, ILLINOIS



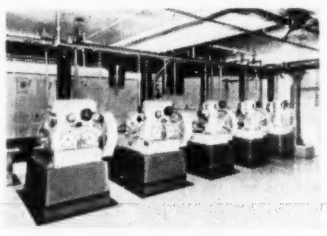
MEAT PACKING

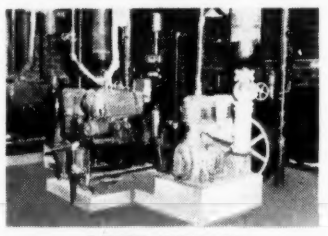
FISHING BOATS

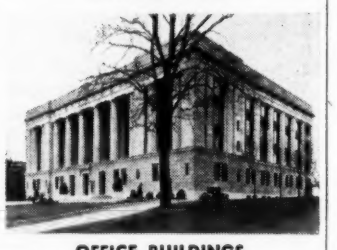
BOTTLING PLANTS

SKATING RINKS

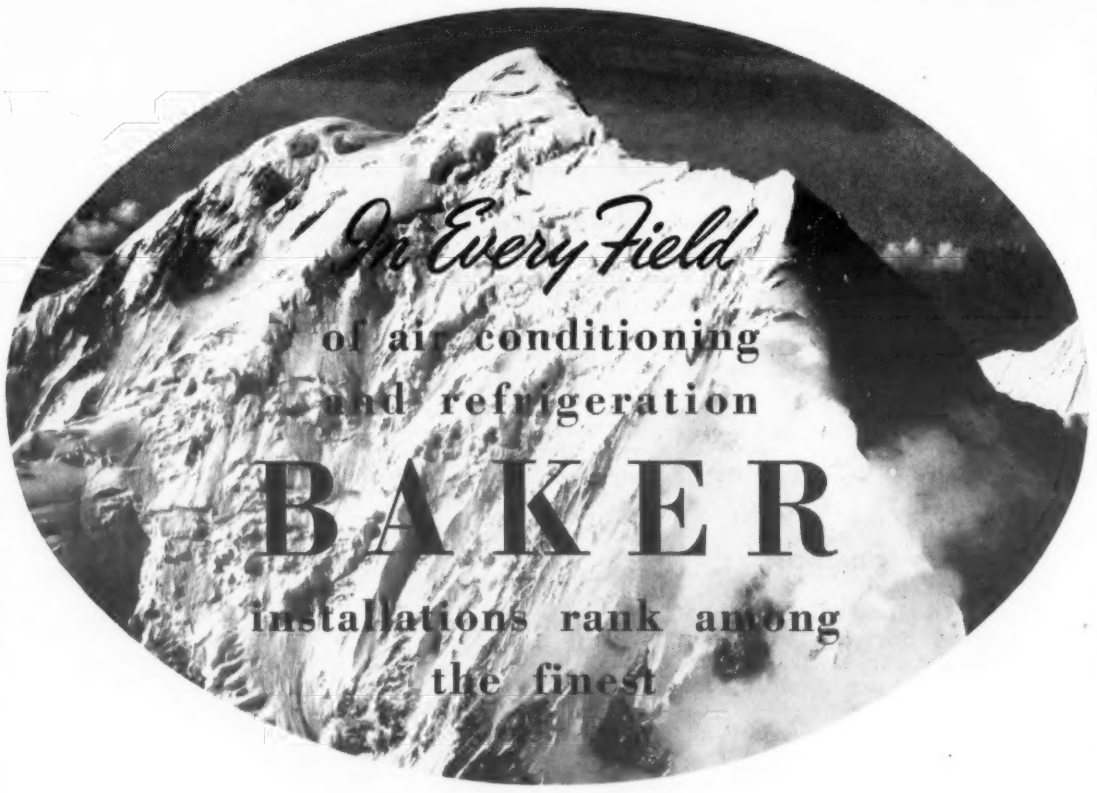
BREWERIES


LOCKER PLANTS

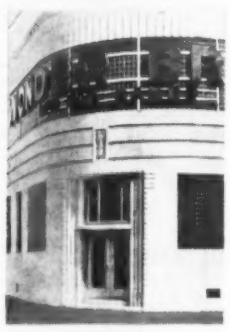

QUICK-FREEZING


OFFICE BUILDINGS

HOTELS



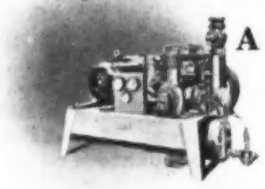
THEATRES


BAKERIES

AT the heart of thousands of successful, high performance installations, lie Baker equipment and Baker engineering. For both Freon and Ammonia, Baker offers one of the world's widest lines — backed by over 40 years of experience in all phases of air conditioning and refrigeration. Franchises are open for qualified distributors in some territories. Write today for complete details.

Zone balanced • Engineered

BAKER



AIR CONDITIONING AND REFRIGERATION

FACTORIES AT OMAHA, NEBRASKA AND SOUTH WINDHAM, MAINE • • GENERAL OFFICES AT SOUTH WINDHAM, MAINE

AN OPEN LETTER TO NORGE RETAILERS

Concerning the Appointment of Harry L. Spencer Director of Manufacturing

It's a real pleasure to have Harry Spencer back in the Norge organization, working again for "the best dealers in town" from coast to coast.

We at Norge know his abilities, and we know that he will put everything he has into the job of providing you with products of traditional Norge quality in the quantities you require.

During the sixteen years he was associated with Norge, consumer acceptance of Norge products increased tremendously.

There were many reasons for this, and Harry Spencer's "quality-makes-sales" philosophy was not the least of these. For he has an abiding faith in the basic Norge policy of building extra value into every product we manufacture.

For Harry Spencer, upholding Norge quality is more than a duty . . . it is his greatest pleasure. He will be in there pitching with the rest of the Norge team to give you the kind of merchandise that spells continued success for you.

Howard E. Beard
President

SEE NORGE BEFORE YOU BUY

Norge Division, Borg-Warner Corporation
Detroit 26, Michigan
In Canada: Addison Industries, Ltd., Toronto, Ontario

A BORG-WARNER INDUSTRY

insist on genuine
Marlo
products
MARLO = HEAT TRANSFER
Since 1925

Electrimatic
Valves, Driers, Strainers, Charging Lines, Quick Couplers, Forged Flare Nuts and Fittings
Ask Your Wholesaler
Electrimatic
2100 Indiana Ave. • Chicago 16, Illinois
Canada—2025 Addington Ave., Montreal

WILSON
REFRIGERATION, INC.
• FARM AND HOME FREEZERS
• REACH-IN REFRIGERATORS
• WALK-IN REFRIGERATORS
• FARM MILK COOLERS
DIVISION OF WILSON CABINET CO., INC.
SMYRNA • DELAWARE

Business 'Indifferent' To Sherman Anti-Trust Law, U. S. Suit Charges

NEW YORK CITY—"The present feeling which seems to prevail in the business community is 'you need not be alarmed if you are caught in a violation of the anti-trust laws because in so far as past transactions are concerned, you can pay a fine which is merely a license fee which may be charged off as the cost of doing illegal business acts.'"

That charge was made recently by Malcolm A. Hoffmann, special assistant to the U. S. attorney general, in recommending six months prison terms for individual defendants found guilty of violating the anti-trust law in the cemented carbide business.

Defendant companies in the case were the General Electric Co., International General Electric Co., Inc., and Carboloy Co., Inc.

Hoffmann added, "If this feeling of indifference to penal provisions of the Sherman Anti-Trust Act is allowed to prevail in the business world, there seems little possibility of using the criminal sanctions of anti-trust laws as effectively as Congress intended."

Hoffmann's recommendation was not accepted by Federal Judge John C. Knox, who imposed fines only.

Nelson Is Henry Valve Agent

CHICAGO—The Henry Valve Co., announces the appointment of A. J. Nelson Co. of Denver, as factory sales representative for the mountain states territory.

Greater Spraying Efficiency, One-Bake Finishes May Reduce Costs of Industry

MINNEAPOLIS—Manufacturers of refrigeration equipment have an eye on one-bake finishes for their products as an improvement over slower methods of application for refrigerator finishes, R. N. Sanger, technical sales engineer of Du Pont's Finishes division told American Society of Refrigerating Engineers members here.

Sanger pointed out that several manufacturers are now cooperating with finish manufacturers to develop economies in the one-bake system which may either utilize a flash bake primer before enameling or two passes of enamel direct to the metal.

So far, manufacturers are reporting satisfactory performance although they find the finish not as resistent to corrosion. But the savings in cost to industry more than compensates for this factor, he said.

He noted that space used for finishing equipment is reduced with shorter conveyor system and less ovens necessary. Progress along these lines has cut the baking operation from four hours to 30 minutes, he said.

Discussing quality improvements he noted a steady upward trend in the quality of various finishes since 1932, starting with lacquer through alkyd and alkyd-UF in 1934-1941 period to the present improved alkyd-UF finish.

Costs per square foot have also been reduced in the same period, he said. In 1932, lacquer was from 4 to 5 cents, 1937-1941 alkyds were 3 cents, and 1941 one cent.

In 1948, due to general material increases alkyds are about 2 cents. Since before the war ingredients have gone up 100%, he noted, while prices rose only 39%.

Sanger reported manufacturers were noting savings in overspray with the use of electrostatic spray. He predicted a continued increase in interest here with the result of more installations of this equipment for refrigerator finishing process.

He said the electrostatic method reduced the manual element and achieved uniformity and diminished labor difficulties. He asserted that attempts are being made to get a one pass automatic spray application, a goal reached in some industries but not yet in the refrigeration industry.

Steam spray shows promise although all the kinks have not been removed as yet, he said. A possible 10% savings in material is achieved in this method. It reduces air bubbles in film and cuts turbulence, as shown in laboratory tests, Sanger said.

A possible 12-15% savings on total bills for materials was indicated through re-use commercially of sludge resulting from overspray, he observed.

Use of sludge extends the use of tutanium dioxide, he said, which is difficult to obtain in sufficient quantities.

Noting advantages of duralux over porcelain and acid resistant porcelain for interior finishes of food compartments, he showed citrus fruit tests which were conducted over periods of from 90 to 120 hours and which left varying degrees of acid stains. He said duralux meant savings in steel, costs of metal treatment, material finishing costs, application, labor, and also rejects due to damage.

On retouching of refrigerators by service dealers, he advised that a good waxing would cut down on the amount of painting, provided the wax had no coloring agent. "Most any organic finish will show discoloration after a lengthy use period," he declared.

Noma Reports $2,800,564 Income for First 6 Months

NEW YORK CITY — Net income after taxes of $2,800,564 on net sales of $41,983,566 was reported by Noma Electric Corp. for the fiscal year ended June 30.

These figures were compared with a profit of $107,519 and sales of $1,628,972 for the fiscal year ended Feb. 28, 1938, to illustrate how the corpoartion's postwar program of expansion and diversification of products has increased sales and profits. The program involved addition of such products as frozen food cabinets and domestic ranges.

Warm Air Group Lists Speakers for Cleveland Convention Dec. 9-10

CLEVELAND—Thirty-fifth annual convention of the National Warm Air Heating & Air Conditioning Association is scheduled to be held at the Hotel Cleveland here on Dec. 9 and 10, the association has announced.

A roster of nine speakers has been lined up to address the convention in fields of current interest to members, the association's announcement said.

Subjects to be covered include business management, sales and promotion, labor relations, traffic regulations, wholesale operation, dealer service, research development, and basing point decisions.

The speakers and their topics are: Hamilton Eames of the American Economic Foundation, "The Biggest Sales Job In All History"; Gene Flack, sales counsel and director of advertising, Sunshine Biscuits, Inc., "The Time Is Now."

Wilbur R. Meredith, industrial consultant and associate professor in engineering administration, Case Institute of Technology, "The Taft-Hartley Act—A Year Later"; R. A. Ellison, traffic manager of the Service Bureau Co., traffic consultants for the association, latest developments in proposed uniform classification ratings on warm air heating products.

John E. Phillips, treasurer of the Stelwagon Mfg. Co., wholesaler's role in warm air heating distribution; Dan Schmidlin, Schmidlin Bros. Heating Co., Toledo dealer, merits of the continuous air circulation program as a dealer prestige builder.

Robert W. Roose, "Ceiling Panel Heating vs. Conventional Forced Warm Air Heating In Research Residence with an Unheated Basement"; Norman Buckley, "Performance of Blower and Resistance of Furnace Blower Unit"; and Lowell B. Mason, commissioner, Federal Trade Commission, problems related to basing point decisions.

W. Verigan Named Sales Mgr. For Artkraft In Michigan Area

LIMA, Ohio—Appointment of W. R. Verigan, of Chelsea, Mich., as regional sales manager for the Artkraft Bev-line of specialty refrigeration products for Michigan has been announced by Morton L. Clark, president of Artkraft Mfg. Corp. here.

Verigan was formerly sales promotion manager of American Machinery Corp., Orlando, Fla.

Canadian Walk-In Mfr. Gets Permit To Build Shop

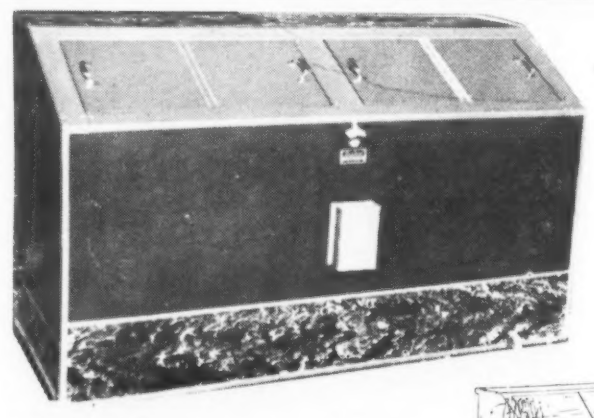
NIAGARA ON THE LAKE, Ont., Can.—The Niagara Town Council has granted D. A. Barbeau permission to erect a building in Delatre St. which will house a shop for the manufacture of refrigerator counters and walk-in units. The building will cost $20,000.

PENN makes a habit of showing up in all of the important spots around the country. Check 'Superior's' high quality chart and you will find why standardizing on 'Superior' tubing becomes habit-forming with top executives and smart service men. Get it straight or get it coiled, 1" O. D. to capillary .093" O. D.—'Superior' offers a host of distinct advantages. 'Superior' specifications are: Super dry, clean and bright, easy bending, and seamless. The word's around—keep Penn tubing around. Get the facts from Penn—write for full specifications, information and colorful literature.

TUBING HAS TO BE GOOD TO BE "SUPERIOR"

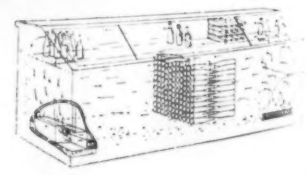
This is it!
The PAPCO Kit
The new, modern, metal package protects Papco flaring equipment. For the best cutting and flaring tools, get Papco. Buy the kit or buy either tool, but always buy Papco. Order yours today.

PENN BRASS & COPPER COMPANY
ERIE, PENNSYLVANIA • Phone 35-111



Patented
No. 2,442,719

Zero Plates as cold as
6 degrees below
ZERO



34 case complete with ½ compressor unit
List $736.60

With air at BLIZZARD Speed, Cools Beverages faster than any other cooler.
Yet a control keeps the beverages at the exact desired temperature.

Dealers Wanted

Manufactured by
ZERO PLATE CO.
1400 S. HASKELL AVE., DALLAS, TEXAS

Better Business Bureau Sets Up Standards To Regulate Appliance Ads In Cincinnati

CINCINNATI—A set of standards for advertising major appliances was set up recently by the Cincinnati Better Business Bureau with the approval and cooperation of local major appliance retailers and distributors, the Bureau has announced.

These standards revive those in effect before the war and add others on a broader basis. They are designed, the Bureau said, to "prevent possible avenues of public complaint and inspire continued confidence in business."

Appliances covered by the standards include refrigerators, heating and cooking stoves, freezers, water heaters, vacuum cleaners, washing machines, ironers, radios, television sets, and all other household appliances.

Text of the standards follows:

"Illustrations—When an illustration or illustrations is/are used and a price or price range is quoted, the price of each illustrated model shall appear prominently adjacent to the illustrations, unless the lowest priced model is illustrated.

"Comparative Prices—Comparative prices should be based on facts. The term 'regular' means a temporary price reduction. 'Formerly' refers to the last previous selling price. 'Originally' means the first price at which the merchandise was offered for sale in that store.

"If a comparative price is used, the copy shall state definitely the year and model number of the unit. No comparative prices should be used on especially constructed models.

"Credit Terms—(a) Phrases such as 'lowest credit terms,' shall not be be used; (b) If carrying charges are added to the price quoted in the advertisement, the fact shall be stated in the copy;

"(c) The phrase, 'no down payment' shall be used only if the retailer will sell merchandise to acceptable credit risks without requiring any down payment and will deliver merchandise without any form of initial payment;

"(d) When an offer is made that appliances be purchased at a certain cost per day, this shall apply to all units in the advertisement, unless otherwise stated.

"The Voluntary Standards for Advertising Consumer Credit, adopted in collaboration with Better Business Bureaus, should be followed in all advertising referring to credit.

"Year of Model—The year of the model shall be accurately and prominently stated in advertising models which are not current.

"Guarantees—When a 'guarantee' and/or 'protection' is offered and any additional charge is made for such 'guarantee' and/or 'protection,' the fact shall be stated definitely in the copy.

"Cost Claims—When statements are made regarding the cost of operation, these shall be accurate in all respects, possible of verification, and based on current cost in Cincinnati.

"Bait—The customer shall be given a reasonable opportunity to purchase all advertised merchandise.

"Quantities—If quantities are limited the advertising should so state or specify number of items for sale.

"Combination Deals — Whenever combination offers are made, the retail price of each of the separate items shall be stated in the advertisement.

"Premiums—No premiums and/or 'free' merchandise shall be offered.

"Floor Samples—When 'floor samples' are advertised, they shall be in fact samples and not repossessed merchandise.

"Capacity—If refrigerator shelf room capacity is stated, the cubic foot capacity shall also appear in type of at least equal size. All other capacity figures shall be clear, accurate, not capable of misleading, and based on manufacturer's specifications.

"Extravagant Statements—Statements such as 'greatest values,' 'lowest prices,' etc. shall not be used.

"Brand Names—In the event an advertiser states that manufacturer's name is withheld on request, the burden of responsibility is on advertiser to furnish proof for this statement."

James Kerbey Appointed To Krich-Radisco Post

NEWARK, N. J.—James M. Kerbey has been appointed general manager of operations of Krich-Radisco, Inc., the northern New Jersey distributor of Norge home appliances and Bendix home laundry equipment.

Previous to joining Krich-Radisco, Kerbey was senior partner in Kerbey, Cook and Lamson, industrial engineers of Philadelphia and Manila, P. I. He and his group were consultants to a number of companies participating in the post-war reconstruction of the Phillipine Islands.

In 1944, he was appointed manager of accounts and finance of RCA International Division, Radio Corp. of America, with headquarters in New York. He played an important role in the organization of this Division, which handles the entire export operation of RCA.

The McCary Signal Light

Prevents Refrigeration Losses
Needs No Servicing
Absolutely Foolproof

Ideal for use on walk-ins, reach-ins, display cases, ice cream cabinets, soda fountains, home freezers, floral boxes, refrigerated trucks, etc. Adjustable from -10° to +60° F.

Contact your local wholesaler

McCARY MANUFACTURING CO.
2823 Mobile Street El Paso, Texas

Wilson Is Assistant To Bendix President

SOUTH BEND, Ind.—Filling a new position at Bendix Home Appliances, Inc., Fred D. Wilson has assumed his duties as assistant to the president, Judson S. Sayre. Wilson has been vice president in charge of operations for Radio Corp. of America, RCA Victor division, since April, 1947.

After joining RCA Victor in 1936 as district manager in Minneapolis, Wilson rose rapidly through a succession of executive positions culminating in his election as vice president in charge of personnel and labor relations in the spring of 1946. A year later he assumed the post which he resigned to join Bendix Home Appliances, Inc.

Acquires Warehouse Space

SYRACUSE, N. Y.—E. W. Edwards & Son has leased the entire second floor of a warehouse here to serve its expanding appliance department, W. N. Wildridge, general manager, has announced.

Dept. Store Sales Up 2% As Eastern Rise Exceeds West, Midwest Declines

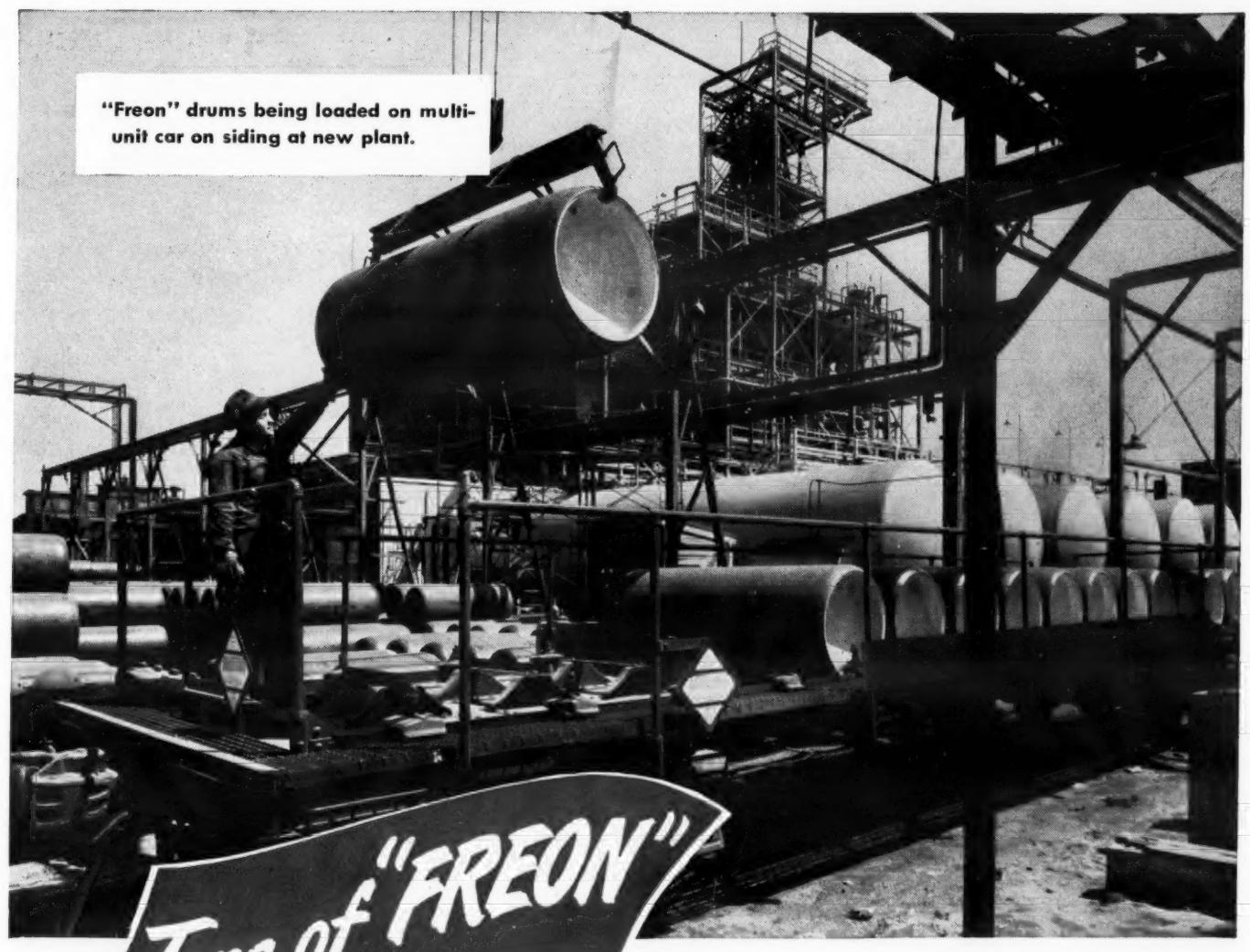
WASHINGTON, D. C.—Increased sales in department stores in the eastern section of the country during the week ending Oct. 30 served to offset declines in the midwest and west and bring the national average to 2% over the same week last year.

All eastern and southeastern Federal Reserve districts reported gains of from 3 to 9%. The Dallas district held even, while four reporting districts showed losses or 2 or 3%.

Percentage gains or losses by districts were as follows: Boston 3, New York 7, Philadelphia 5, Cleveland 9, Richmond 5, Atlanta 5, Chicago -2, St. Louis -2, Kansas City -3, Kansas 0, San Francisco, -3.

Dohrmann's Appliances Opens

LOS ANGELES—A street floor appliance store has been opened by Dohrmann's next to the company's home furnishings establishment here.



Tons of "FREON"

New Kinetic Plant steps up Production

TODAY there is no shortage of "Freon." Actual production obtained shows that the new "Freon" plant at East Chicago, Indiana, will increase the supply by approximately sixty per cent. No reason —now—for individual stock-piling. No reason for not returning "Freon" cylinders promptly. Empty cylinders will always be needed to help ship that production and meet current demands for "Freon" now available.

Shipments continue at peak levels. That is because manufacturers of air conditioning and refrigerating units, as well as insecticidal aerosols, are using more "Freon" than ever before. They recognize that "Freon" refrigerants and propellents are safe . . . nontoxic, nonflammable, and nonexplosive . . . ideal for every type of commercial, industrial or household requirement.

The quality and uniform purity of these refrigerants (they are also practically anhydrous: less than 10 parts of moisture per million parts of "Freon"!) contribute to the satisfactory performance and the long life of modern, compact, space-saving refrigeration machines.

Smart purchasers today check carefully to determine whether the equipment they are buying is designed to utilize "Freon" safe refrigerants. It is a good way to safeguard their investments. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.

KINETIC
REG. U. S. PAT. OFF.
FREON
REG. U. S. PAT. OFF.
safe refrigerants
"FREON" IS KINETIC'S REGISTERED TRADE-MARK FOR ITS FLUORINATED HYDROCARBON REFRIGERANTS AND PROPELLENTS

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

NEWS is the *only* publication serving the refrigeration and home appliance fields which has the benefit of this grass-roots advice. As a subscriber, perhaps you may be interested in learning more about it.

What Eastman's Editorial Research Is and Does

Editorial research, in the Eastman manner, is *product* research (or as General Motors puts it: "customer research,") for publications.

Because a business paper publisher is bringing out a new product every month, every week or every day, he needs such continuing product research, inasmuch as his opportunities to make mistakes or to make improvements are not only great but extraordinarily frequent.

Eastman Research works like this: Eastman's field men take a given issue of a publication, like AIR CONDITIONING & REFRIGERATION NEWS. At a certain specific time after the mailing date of this issue, Eastman's trained investigators in a given group of cities call upon a specified number and kind of readers.

First, these personal investigators find out whether or not that issue has been read—by the reader or by anyone else. This "reader activity" is faithfully recorded and reported.

When the reader is qualified (through having read the issue and having read at least half of what he expects to read) the interviewer takes a "reader traffic" report. That means going through every particle of the editorial material, from the table of contents to the back cover with a fine-tooth comb, and finding out not only what the reader reads but how he reads it, with what degree of interest and with what benefit or satisfaction.

In this process the interviewers check every item, every heading or caption, and every picture in that issue of the detectived publication. Such an interview takes an average of three quarters of an hour, and amounts to a complete, detailed reconstruction of the reading of that particular issue by that particular reader.

Along with this "traffic checking" and the filling out of a comprehensive questionnaire, there arrives on the editor's desk one of the most important products of this research: a verbatim report of all these subscribers' observations and criticisms —which are skillfully extracted by the investigator in the course of the interview. Often these spontaneous reactions will bring out significant points that no editor or interviewer would ever think to put into any questionnaire.

Readers Cooperate Gladly

This type of constructive criticism calls for skill on the part of the interviewer, and much more than ordinary cooperation on the part of the reader. That cooperation is almost always freely given to Eastman interviewers—out of respect for the purpose of their job, and its obvious sincerity. After all, the reader is being asked what the editors can do to make *his* paper more interesting and useful to *him*. More often than not he appreciates the compliment that is implied by asking his advice.

It is interesting to note that readers are often apologetic upon the conclusion of one of these interviews, remarking that they thought they had done a better job of reading than it appears they did and saying, "Come around next month and I'll give you a better interview." However, the same reader is seldom if ever called on twice.

Interpreting the Suggestions

If a typical editor had all these interviews laid in his lap, probably he wouldn't know what to do with them. Or, if he did, he would have no way of knowing whether some of the things brought out in these interviews were good or bad.

If, for instance, 10 per cent of the readers didn't get to read anything before the next issue came along, should he be proud that ninety per cent *did* read that issue or ashamed because ten per cent *didn't?* Or if the average reader read fifty per cent of the editorial content, would that be a *good* showing or a *poor* one?

The Eastman interpretation not only gives its clients these facts, but tells its polled editors what these facts mean. The showing on each significant point is compared not only with previous records, but with the average or "composite" for other comparable publications.

In that way each publication has a stake in every survey which Eastman makes for any client. The Eastman Organization serves virtually as a clearing house for reader experience and editorial experience.

In addition to reporting the facts and their significance, these researchers make sharp and critical recommendations — often supported by the specific experiences of other publishers they serve.

Clients of this expensive research operation are not expected to accept or adopt all of these recommendations. Frequently, they don't. They may even have good reasons for doing the very opposite. But the one thing that is expected is that they do *something*—and the recommendations are repeated until they do.

After all, they are pretty busy getting out their papers and getting the business to keep on getting them out, and need someone on the outside to keep prodding them until they do the things they promise themselves they should do.

Year After Year

That continuous prodding is just one of the advantages of the continuity of this work, and there are many others. These surveys are made several times a year, with a separate and comprehensive report on each one.

Thus there is a continuing record of progress (or the lack of it) on every consideration affecting the publication's relations with its readers.

Also, the Eastman Researchers provide a continuing basis for checking the effectiveness of anything new that their publishing clients may undertake.

Thus, the editors enjoy a continuing opportunity for editorial experimentation. By deliberately trying out new ideas and seeing exactly how they click with readers, they progress.

Most important of all, perhaps, is the opportunity this continuing research affords AIR CONDITIONING & REFRIGERATION NEWS to catch *trends* —in reader interest, reader preference or anything else—*at the beginning* (when there is a chance to do something with them or about them) and also later on, when these trends have become fully established and obvious.

What This Means To YOU

The most important thing any publisher gets out of all this is *confirmation*. If their editors weren't right in most of their thinking and planning they wouldn't be their editors. But there is all the difference in the world in the kind of job one does when he *knows* he's right and what he does when he just *hopes* he's right.

The second most important thing is *new ideas*. There is no better source of new ideas for a publication than its readers. And there's no better testing ground to prove how good the new ideas really are, or how well they have worked out, than recourse to the readers themselves.

The third thing is *correction*. Being human, all editors make mistakes. It's disconcerting to have them shown up; but its better to *know* you're wrong than to keep on making errors.

Every Eastman client makes important changes—drops some things and adds others—on the basis of Eastman Research findings. Also, they get around to doing things they planned and promised but put off, because their readers, via the Eastman reports, literally talk them into it.

Perhaps the most important result of all is a sharpening up of the editor's sixth sense, the sense of editorial values. For it isn't always the big spectacular things that a publication does which brings it closer to the hearts of its readers—although they're mighty important. Sometimes its a multitude of little everyday things that go to make it more helpful, more dependable, and more friendly.

And What Does the Advertiser Get Out of It?

The advertiser buys circulation *and readership*. If "circulation" was all he bought he'd be sadly gypped. Copies printed and mailed don't mean a thing—except production costs! It's copies *read* and *the way they're read* that counts, for the *Advertiser*, for the *Subscriber*, and for the *Publisher*.

Readership is the third dimension of circulation, the thing that gives it substance and value. Today most advertisers are fast finding that out. Readers have known it all along.

They're Conscientious

Being accepted as an Eastman Research client is evidence of the earnest and unflagging effort of the publishers who employ it, and the editors who use it, to give the utmost value to their readers and hence to their advertisers.

This is assured by the fact that such publishers spend money entirely outside of their promotion budgets to buy this service. They could buy or set up a much less expensive editorial research operation, and brag about it just as much.

They can't get a thing out of it except editorial improvement—that means improved readership for you. And if they weren't getting that, in definite and measureable terms, they wouldn't spend the money, nor would Eastman have them as clients. He couldn't afford to, because his reputation depends wholly on their satisfaction and results.

Who Is This Bird?

Roy Eastman was one of the pioneers in market research—many credit him with being *the* pioneer market research man. For many years he headed the only independent market research organization in the country. He also established the first fully-organized advertising agency research department. (Fuller & Smith, Cleveland, 1919.)

In 1938, as he puts it, "more by accident than by design," he began to specialize exclusively in editorial or reader research, and built up specialized methods, equipment, and personnel for that purpose.

This organization now serves a number of leading periodicals. Both because of the intimate, confidential nature of the service and because of a necessarily limited capacity for such service, its clientele is restricted to one publication only in any given field.

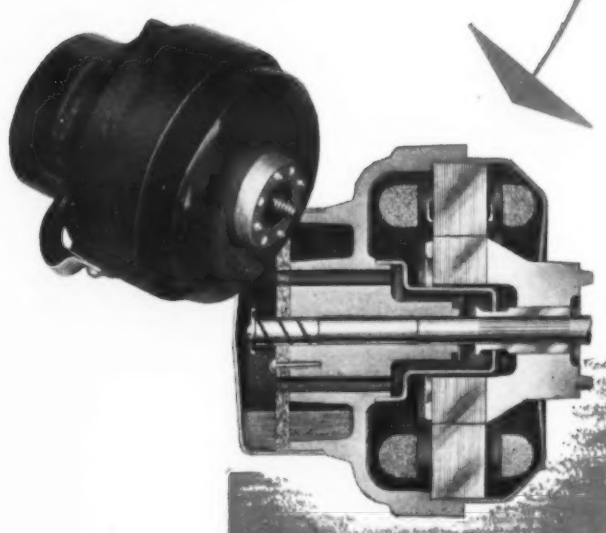
Prior to this development, while research had been employed liberally, and indeed lavishly, by many publishers, practically all of it was conducted directly or indirectly for promotional purposes. Obviously such research seeks for things to exploit rather than for things to improve and its critical aspects are negligible.

From the beginning the Eastman organization has strictly prohibited any promotional use of its editorial reports, and any client violating this restriction is subject to suspension. This rule, incidentally, has the hearty endorsement of almost every Eastman client.

But, man! What a temptation it is to us here at the NEWS to show some of these reports to advertisers!

heat it! cool it! keep it moving!

PUT GE UNIT-BEARING MOTORS on your fans!



You can control and direct air flow with G-E unit-bearing motors on your fans.

Because they are designed primarily for fan service, G-E unit-bearing motors have the characteristics you want—quiet operation, dependable performance, minimum maintenance, and low cost.

The unique single bearing construction gives you permanent lubrication from a lifetime, sealed oil reservoir. Oil is force-fed along the shaft to flood the bearing constantly for quiet operation. Bearing and stator housing are machined in one set-up for accurate and permanent alignment, dependable operation.

G-E unit-bearing motors are easily adapted to your mountings, use simple, stamped-metal fan blades available from the factory. For immediate delivery of these sturdy, dependable motors, call your nearest G-E sales representative. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

GENERAL ELECTRIC

700-88

insist on genuine Marlo products

MARLO = HEAT TRANSFER

Since 1925

Be Smart! Get the New No. 148 Fall and Winter DEPENDABOOK!

HARRY ALTER'S REFRIGERATION PARTS CATALOG

A catalog issued to and for the trade only...Write—NOW—on your letterhead, for your copy of the most nearly complete refrigeration-parts-and-supplies catalog in the business—the new DEPENDABOOK!

The HARRY ALTER CO. 1728 SOUTH MICHIGAN AVE. CHICAGO 16, ILL. 134 LaFayette St., New York 13, N. Y.

WHOLESALE ONLY

Drugstores with Soda Fountains Average 60% More Business Than Those Without

ATLANTIC CITY, N. J.—The soda fountain in a drugstore is important to the ice cream industry, but it more than pays its way in terms of what it means to the drugstore, Dan Rennick of the Drug Topics Co. told the International Association of Ice Cream Manufacturers when he addressed them at their annual convention on "The Value of the Soda Fountain to the Drugstore."

Surveys have revealed that drugstores with soda fountains do 60% more business on the average than ones without fountains, the speaker declared.

It has been positively demonstrated that extra sales of other drugstore items are generated by the extra store traffic afforded by having the soda fountain service, Rennick declared.

Studies by independent sources have shown that 47% of the soda fountain customers in a drugstore make another purchase before leaving the store.

Such studies have also shown that the soda fountain trade is more important to the neighborhood drugstore than to the "downtown" drugstores, probably because of the tendency of the neighborhood shopper to confine her stops to a minimum of places.

But what about those druggists who want to throw out soda fountains because of the "overhead" and the fact that most fountain sales are for small amounts while prescriptions and sundries run much larger per sale.

"Most drugstores just can't exist on prescriptions alone," Rennick said, "and there are some figures which seem to demonstrate this point.

"A government survey showed that fountain business accounted for 30% of the average drugstore net profit, on 25% of the store's total sales.

"A study made in 1947 by Eli Lilly & Co., producer of pharmaceuticals, showed that the average drugstore net profit was 7%, while the average net profit on fountain business alone was 8.2%."

Soda fountains currently account for 18.1% of a drugstore's total volume, on the average, Rennick declared. They are the one department in a drugstore that has shown steady growth over a period of years.

R. E. Deaux Takes Post as Chief Engineer With Coolerator Co.

DULUTH, Minn.—Ward R. Schafer, vice president and general manager of the Coolerator Co. here, has announced the appointment of R. E. Deaux as chief engineer.

R. E. Deaux

For the past several years Deaux has been associated with the Gibson Refrigeration Co., first as head of the engineering laboratory, later as process and specifications engineer and, until his appointment at Coolerator, he was the assistant chief engineer.

A graduate electrical engineer, Deaux began his career in 1929 as a field test engineer with the Westinghouse Electric Co. in Springfield, Mass., where he subsequently became head of the company's testing laboratory. Later Deaux spent two years as process engineer in a reoperating station for Westinghouse located in Chicago.

Temp-O-Matic, Inc. Organized To Deal In Refrigerators

LOS ANGELES — Temp-O-Matic, Inc. has been formed in Los Angeles County, with a capital of $250,000, to manufacture, distribute, and install refrigeration units and freezing devices. Principals are: Russell L. Hebebrand and James M. Hebebrand, both of Beverly Hills, Calif; and Dixon T. Bell, of Los Angeles.

Remodeled A&P Features Self-Serve Display Fixtures

WATERTOWN, N. Y.—The remodeled A & P Supermarket at 237 Arsenal St. features a new refrigerated self-service meat department, new refrigerated dairy department, new refrigerated produce department, and a new frosted food department.

San Francisco Schedules New Apprentice School In Refrigeration Field

SAN FRANCISCO — Approximately 2,000 sq. ft. of floor space in the Ford building here is scheduled to be devoted to refrigeration under a $2,000,000 program for converting the structure into a modern apprentice training school, it has been announced.

The program is part of the $48,000,000 school bond measure approved by voters in the recent election.

According to an announcement by the Refrigeration Contractors Association of Northern California, the group's joint apprenticeship training committee has been asked to check and approve preliminary plans and submit recommendations on shop equipment, layout, and the like.

The association said the Oakland public school department is also going ahead with a similar building program for the training of apprentices.

Maine Distributor Named by Baker Ice

SOUTH WINDHAM, Me. — Baker Ice Machine Co., Inc. has announced the appointment of Acme Engineering Co. Inc., 46 Market St., Portland, Me., as distributor of Baker products for the state of Maine.

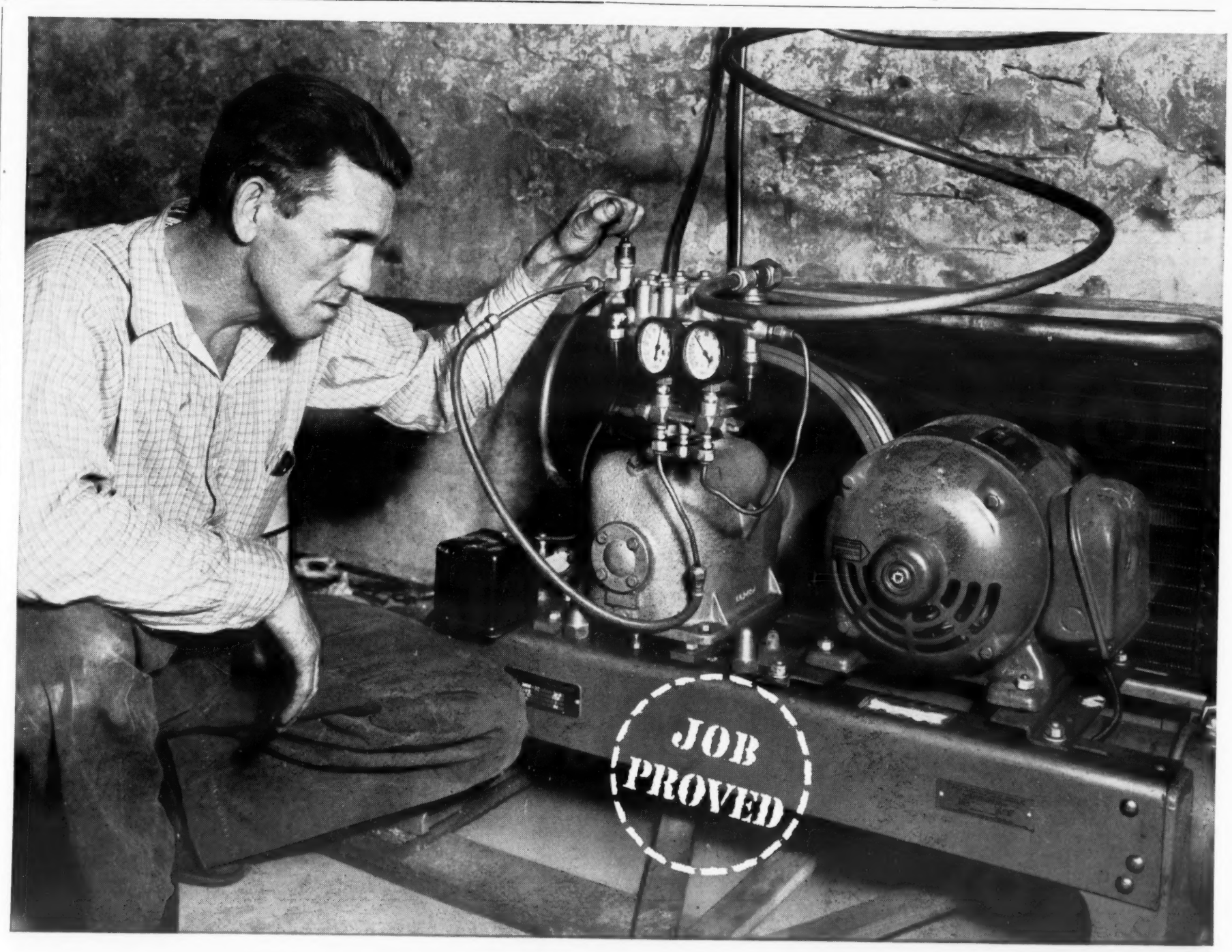
J. J. Kelley

The Acme Engineering Co. is a newly formed Maine corporation headed by James J. Kelley, who, for the past several years, was connected with the Jarvis Engineering Co., the Baker distributor in Boston.

Kelley's firm brings to the state of Maine an engineering and contracting service organization for Baker's products.

Brown Instrument Co. Appoints Publications Advertising Agent

PHILADELPHIA — The Aitkin-Kynett Co. of Philadelphia has been retained by Brown Instrument Co. to handle its publications advertising. The move was described by Brown officials as being related to the company's expansion of its sales, production, and physical facilities.



EASING A FREEZING PROBLEM

Suniso Oil Keeps a Compressor in 100% Troublefree Service After Competitive Refrigeration Oil Fails in a Few Days

An ice cream parlor opened for business with a brand-new refrigerating unit. The machine was located in a poorly ventilated basement, where summer temperatures run in the high 90's. In a few days it heated up; next it ran spasmodically; then, in less than two weeks, it quit running altogether—right at the start of the busy season.

The compressor was taken down and found to be heavily gummed with sludge and carbon on walls and valves. The oil had proved unequal to the job. The unit was cleaned with the aid of kerosene and chemicals. It was then charged with a "Job Proved" Suniso Refrigeration Oil. No trouble of any kind has been encountered since. None due to the lubricant need be expected—judging from the record of Suniso in the service of others.

From ice cream parlor to office building, the demand for Suniso is outstanding in the world of refrigeration and air-conditioning—Suniso Oils are the predominant choice of equipment manufacturers in this field.

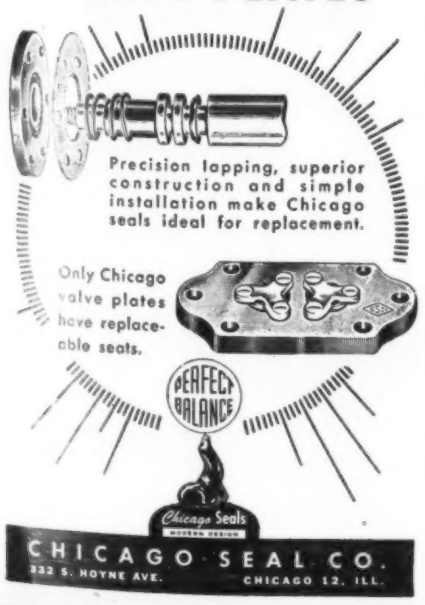
Suniso Oils come in several grades, each with extremely low pour-point and low wax-separation point. They have exceptional dielectric strength and high resistance to chemical change when mixed with Freon or any other modern refrigerant. For your copy of the 52-page illustrated bulletin "Lubrication of Refrigeration and Air-Conditioning Equipment," write Department RN-11.

SUN OIL COMPANY · *Philadelphia 3, Pa.*
In Canada: Sun Oil Company, Ltd.
Toronto and Montreal

SUN PETROLEUM PRODUCTS
"JOB PROVED" IN EVERY INDUSTRY

SUNOCO

PLAYSAFE
USE
CHICAGO SEALS
and
VALVE PLATES


Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement.
Only Chicago valve plates have replaceable seats.
PERFECT BALANCE
Chicago Seals
CHICAGO SEAL CO.
832 S. HOYNE AVE. CHICAGO 12, ILL.

ASRE STANDARDS

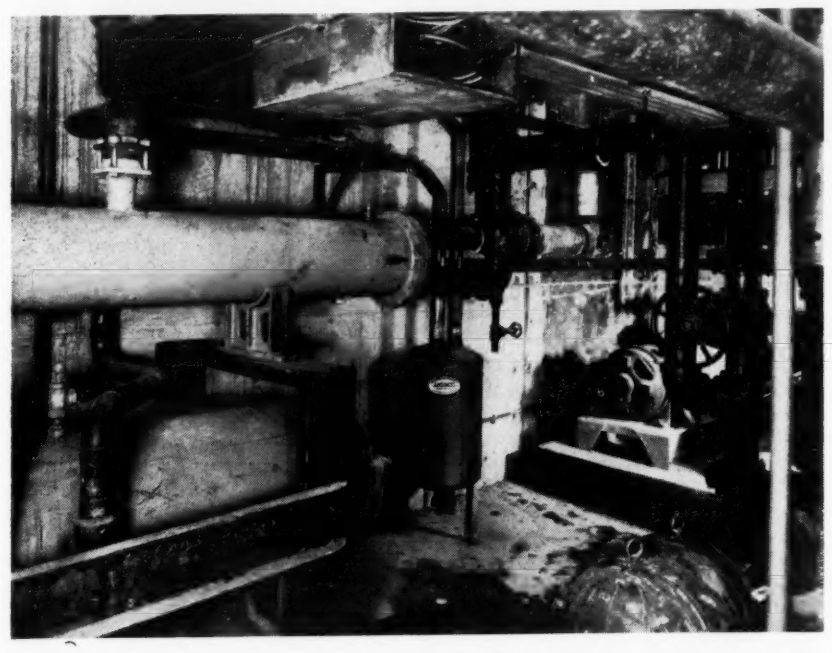
Widely Used and Accepted as Recommended Practice in Refrigeration and Air Conditioning

#13	METHODS OF RATING AND TESTING AIR CONDITIONING EQUIPMENT (supplemented by Standard #25—not sold separately) both for	75¢
#14	METHODS OF RATING AND TESTING MECHANICAL CONDENSING UNITS	50¢
#15	SAFETY CODE FOR MECHANICAL REFRIGERATION	50¢
#16	METHODS OF RATING AND TESTING SELF-CONTAINED AIR CONDITIONING UNITS FOR COMFORT COOLING	50¢
#17	METHOD OF RATING AND TESTING REFRIGERANT EXPANSION VALVES (proposed revision)	50¢
#18	METHODS OF RATING AND TESTING SELF-CONTAINED MECHANICALLY REFRIGERATED DRINKING WATER COOLERS	25¢
#19	WATER CONTENT LIMITS FOR REFRIGERATING SYSTEM PARTS	25¢
#20	METHODS OF RATING AND TESTING EVAPORATIVE CONDENSERS	60¢
#21	METHODS OF RATING AND TESTING COMPLETE CAN-TYPE MILK COOLERS	25¢
#22	METHODS OF RATING AND TESTING WATER COOLED REFRIGERANT CONDENSERS	40¢
#24	METHODS OF RATING AND TESTING WATER AND BRINE COOLERS	40¢
#25	METHODS OF RATING AND TESTING FORCED CIRCULATION AND NATURAL CONVECTION AIR COOLERS FOR REFRIGERATION (supplement to Standard #13—not sold separately) both for	75¢
#26	RECOMMENDED PRACTICE FOR MECHANICAL REFRIGERATION INSTALLATIONS ON SHIPBOARD (proposed)	$1.00
	Complete set of all above, paper bound	$4.50

Send orders with remittance or COD instructions to

The American Society of Refrigerating Engineers
40 WEST 40 STREET NEW YORK, N. Y.

Machinery Behind the Scenes



Some of the equipment employed in the 75-ton air conditioning installation at the Boulevard Frontage Medical Center of Hampton Village in St. Louis and shown in this view of the machinery room includes the condenser, 15-hp. circulating chilled water pump, a 75-ton Aminco oil separator, and one of the three 25-hp. Carrier condensing units.

• • •

Medical Center's Year-Round Conditioning Allows Individual Room Temperature Control

ST. LOUIS — Individual control over the temperature in each room is provided by the 75-ton year-round air conditioning system which was installed in the Boulevard Frontage Medical Center of the Hampton Village shopping center here by Sears and Piou, local contracting firm.

There are 150 Carrier Weathermaster units in the installation, one being located under each of the 150 outside windows in the structure. These machines are indirectly supplied with cooled air by three 25-hp. Carrier compressors and 11 small fan-and-coil units. In winter the Weathermasters supply hot air to the rooms.

Here's how the system works. The three 25-hp. machines are connected to refrigerate a shell-and-tube water chiller. From here a 15-hp. circulating pump forces the chilled water to 11 small fan-coil units located through the building. Constructed with 8-row coils, each of these has a capacity of approximately 2,000 c.f.m.

These 11 units then supply air, cooled to about 50° or 55° F. during summer, to the 150 Weathermaster units. The latter entrain secondary room air so that a quantity of cooled, but not cold, air is introduced into each room for cooling purposes. A control is provided on each Weathermaster so that the occupant can manually adjust the equipment to his own ideas of comfort.

Return air is taken back through the center rooms alongside the main corridors, where it is returned to the 11 fan-coil units through ceiling intake grilles.

A master control in the corridors operates face and by-pass control dampers to regulate the temperature of the air entering the Weathermasters.

To circulate the condensing water from the three refrigerating machines through the condenser, a 30-hp. water pump is provided. This pump is also said to have sufficient capacity to circulate enough water for air conditioning the ground floor of the structure, if such a move should be made in the future. Estimated load on the ground floor would be 125 tons.

Recovery of condensing water is achieved by a cooling tower of 200-ton capacity. The large size cooling tower was selected so that it could handle the 125 tons which would be added to the present 75-ton load if the ground floor is ever conditioned.

Operation of the air conditioning system on the heating cycle is described by Sears and Piou as follows:

"During the winter the 15-hp. chilled water pump circulates water through two large Pacific boilers at about 200° F. This water again goes to the 11 upper units as well as circulating through the lower pipes which carried condenser water during the summertime.

"Each unit is equipped with a separate hot water coil installed in the ductwork, and during the wintertime this water is by-passed from the condenser and run through the hot water coil for heating purposes."

The condensing units employed on the job, incidentally, are Carrier's direct-driven series "H" machines equipped with mechanical unloaders designed to maintain the units in constant balance with the load. As the load lightens, the machines unload themselves, which tends to keep the machines running most of the time, more or less, but providing a lower consumption in direct proportion to the load, explains Sears and Piou.

Nemes Is Fedders Mgr. In Mid-Atlantic Region

BUFFALO—E. A. Bonneville, sales manager of the unit air conditioner division, Fedders-Quigan Corp., has announced the appointment of Ted Nemes as regional manager for the middle Atlantic states territory.

Ted Nemes

Nemes was formerly associated with the York Corp., York, Pa. He will make his headquarters at 1554 Old Farm Lane.

His territory includes: eastern Pennsylvania, southern New Jersey, Maryland, Delaware, West Virginia, Virginia, and Kentucky.

80-Ton Conditioning System Installed In Florida Theater

FORT PIERCE, Fla.—Installation has been completed on the new, 80-ton air conditioning system at Sunrise Theater here, it has been announced.

The system has 16 outlets, eight on each side. It handles a total of 22,400 c.f.m. of air, each outlet having a capacity of 1,400 c.f.m.

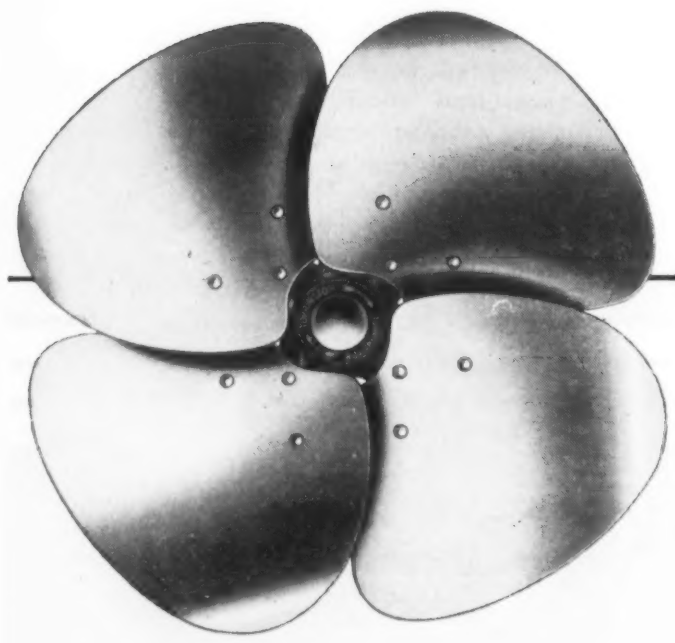
A NEW NOTE IN FAN BLADES

S#ARP INCREASE IN PERFORMANCE

In impartial tests, eight competitive fan blades were recently compared with HI-Eff blades of the proper diameter and pitch. In every case, air delivery was *sharply increased*. Within the same space limitations and with the same power, the HI-Eff blade delivered as much as 28% more air.

HI-Eff's high efficiency is the result of four years of research and development which was from the beginning devoted to bringing out the best fan blade ever placed on the market.

Both in looks and deeds, HI-Eff is *more fan for* your money! If you have not already received complete performance data, send for it today. Then *make your own comparisons.*



HI-Eff

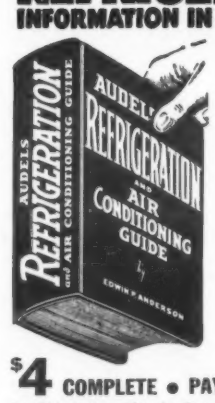
AIRISTOCRAT

THE TORRINGTON MANUFACTURING COMPANY
TORRINGTON, CONNECTICUT

Diffusion Type
UNIT HEATERS
For low-pressure steam and hot water
•
Wall and Ceiling
DIFFUSERS
M&E EST. 1866
For all above-freezing applications
CATALOG ON REQUEST
MERCHANT & EVANS CO.
PHILA. 46, PA.

REFRIGERATION INFORMATION IN A HANDY FORM

NOW READY



Audels Refrigeration and Air Conditioning Guide. Highly endorsed for Engineers, Servicemen, Shopmen. Covering modern Principles, Servicing, Operation & Repairs of Household, Special, Commercial & Industrial units. Including Freon, Quick Freezing Lockers, Water Coolers and Air Conditioning Systems. ANSWERS YOUR QUESTIONS 1280pages,46chapters All Fully Illustrated and Indexed for Ready Reference

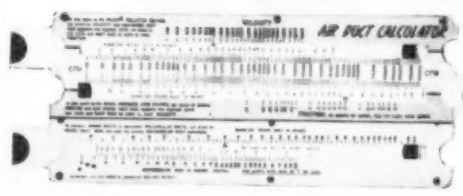
$4 COMPLETE • PAY ONLY $1 A MONTH

Get This Information for Yourself. Mail Coupon Today. No Obligation Unless Satisfied. ASK TO SEE IT.

AUDEL, Publishers, 49 W. 23 St., N. Y. 10
MAIL AUDELS NEW REFRIGERATION GUIDE for free examination. If O. K. I will send you $1 in 7 days; then remit $1 monthly until price of $4 is paid. Otherwise I will return it.

Name_____
Address_____
Occupation_____
Employed by_____ R-12

DEALERS . . . . JOBBERS
PLAN JOBS EASIER, FASTER WITH AN
AIR DUCT CALCULATOR



No need to spend countless hours poring over charts to figure air distribution. Simply send us your order for this revolutionary new Air Duct Calculator which gives rectangular equivalents of round ducts, recommended duct velocities, metal gauges, weights, etc., simply and quickly. A real time and labor saver for warm air and air conditioning installers. EASY TO READ. All sizes at one setting. Price $2.00 Postpaid.

THOMAS M. JACKSON CO., Dept. C, P. O. Box 2091, Detroit 31, Mich.

Cold Storage Piling Space Rose 20 Million Cu. Ft. During Two-Year Period

WASHINGTON, D. C.—Net piling space in all types of cold storage in the United States increased by 20 million cubic feet from Oct. 1, 1945, to Oct. 1, 1947, according to a report released by the U. S. Department of Agriculture.

This brings the total net piling space in America's cold storage plants to an all-time high of 497,035,000 cu. ft. Gross space amounts to 675,041 000 cu. ft.

Over one-half of this space is accounted for by public refrigerated warehouses. The remainder is divided between private and semi-private cold storages, meat packing plants, and apple houses.

Commenting on the report, the National Association of Refigerated Warehouses said increasing demands for freezer storage space, due to the rapid development of the frozen foods industry, "have been met by the public refrigerated warehousing industry through the addition of 5 million cu. ft. in the below 29° F. range during the 1945-47 period.

"Some of this space is the result of new construction and some is former cooler space which has been converted to the lower temperature ranges. Public cold storage space has continued to expand during 1948, which is not covered in this report.

"Although public refrigerated warehouses represent just slightly more than half of the nation's cold storage space, they handle on the average 80 to 85% of America's perishable food supplies.

"In 1946, for example, 91% of the frozen fruits and vegetables 85% of the dairy products, 93% of the frozen poultry, 91% of the eggs, 98% of the fresh fruits and vegetables, and 41% of the meat in the nation's warehouses was held in public refrigerated warehouses.

"In spite of such vast quantities of our vital food supplies being placed in public warehouses, the industry has more than met the demands placed upon it. This fact is reflected in the official government figures of public refrigerated warehouse occupancy which show a continous over-all decline since 1946.

"On Oct. 1, 1946, cooler space was 80% and freezer space 88% occupied. The same figures a year later were 75% and 82%, respectively. On Oct. 1, this year, they were 64% for coolers and 71% for freezers.

"The public refrigerated warehousing industry has conclusively demonstrated that it will meet all problems involving storage of the nation's food supplies. In no large area of the country today is there a shortage of cooler or freezer storage space."

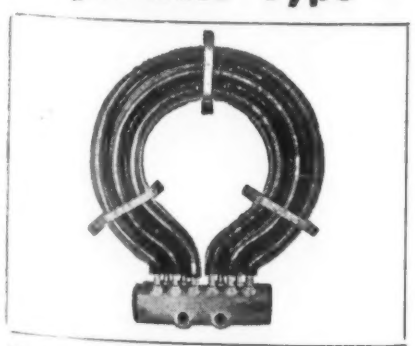
Refrigeration Corp. Appoints Sales Mgr. for St. Louis Region

NEW YORK CITY — Edward R. Legg, president of Refrigeration Corp. of America, announces the appointement of Floyd Marx as regional sales representative, with headquarters in St. Louis.

Marx was formerly associated with C. Nelson Mfg. Co., Anheuser-Busch, and, more recently, reorganized the Big 4 Supply Corp.

ROME-CONDENSER

★ **Jointless Type** ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers

ROME-TURNEY
RADIATOR COMPANY
222 CANAL ST.
ROME, N. Y.

Refrigerated Egg Truck Makes Possible Direct Return of $30,000 to Co-op Group

LOOMIS, Neb.—The purchase of a refrigerated truck has opened a new market in the southwest for 400 egg producers of the Cooperative Poultry & Egg Marketing Association of Loomis.

The truck has been in operation since the first of this year and in six months' time made 33 trips to Phoenix, Ariz., to deliver eggs, making possible a direct return of $30,000 for the 400 Nebraska producers.

The association has become the chief supplier of eggs for a large Arizona grocery chain since the refrigerated trucking plan was inaugurated. Some eggs also are being marketed through other outlets.

Officers of the association explain that the moving of eggs to the southwest has enabled farmers of the Nebraska community to get better than average market price for their products.

As a result of a grading system and the creation of dependable market through use of mechanical refrigeration to keep eggs fresh while in transport, the association has been able to consistently pay its members well above the average price.

During August, for example, association members received an average price of 40.9 cents per dozen for their eggs. The Nebraska market average for that month was 36.9. To make operation of the refrigerated truck even more profitable, a profit is being realized on return loads of Arizona citrus fruits and similar produce.

Loomis is a small town in an irrigated Nebraska farming community, but its egg output this year has been important to the state of Arizona. The 400 association members shipped enough eggs in the truck to provide 10 eggs for every person in Arizona over a six months' period.

H. N. Kirchdorfer Named Eastern Div. Sales Mgr. For Reynolds Metals Co.

LOUISVILLE, Ky.—H. N. Kirchdorfer, an assistant vice president in the Reynolds Metals Co. here has been named eastern division sales manager for the firm's parts division, according to W. G. Reynolds, vice president and general manager of the division.

In his new position, Kirchdorfer has charge of sales of Reynolds fabricated products in all New England states plus New York, Pennsylvania, New Jersey, Delaware, and parts of Maryland, Virginia, West Virginia, and Ohio. He is making his headquarters at the company's New York City office.

Kirchdorfer has been with Reynolds for 14 years rising up through the purchasing department to the position of assistant vice president and assistant to W. G. Reynolds in 1943.

$500 Fine Ordered for Unlicensed Contractor

SAN FRANCISCO—Found guilty of a misdemeanor for operating a contracting business without a state license, Sam Klingerman was sentenced in Municipal Court here to pay the maximum fine of $500 or serve 30 days in jail.

Klingerman tried unsuccessfully to collect $950 for alteration work on a Third St. residence allegedly without fulfilling his contractual obligations to the owners satisfaction and without a license.

M-H Declares 2 Dividends Payable Dec. 10 and Jan. 3

MINNEAPOLIS—The usual quarterly dividend of 50 cents on the common payable Dec. 10 to stock of record Nov. 24, and an extra of 50 cents payable Jan. 3 to stock of record Dec. 20, has been voted by Minneapolis-Honeywell Regulator Co.

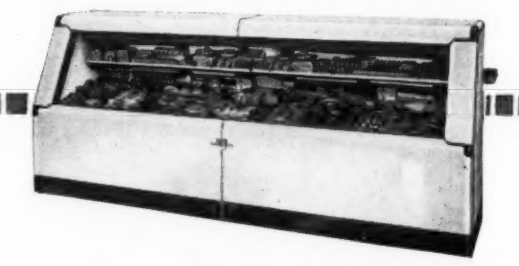
FOLLOW THIS

LINE FOR

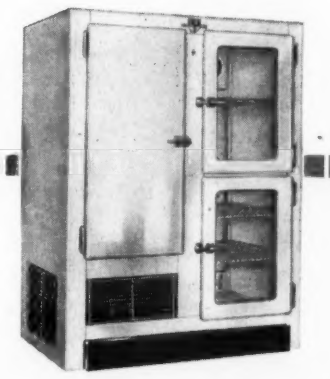
GREATER PROFITS

It's the Koch line of *quality* refrigerators we're talking about . . . the line that has meant profit and satisfaction to dealers and users alike since 1883! There is a Koch refrigerator for nearly every type of commercial use. Look at the models shown here . . . then get the *inside story* on this profit line without delay. *You'll agree. The line of least resistance is Koch!*

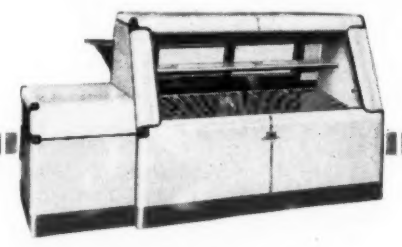
25 cu. ft. stainless steel refrigerator, welded into one compact unit. Nothing like it, anywhere, for durability and quality. Also made with ice-maker unit.



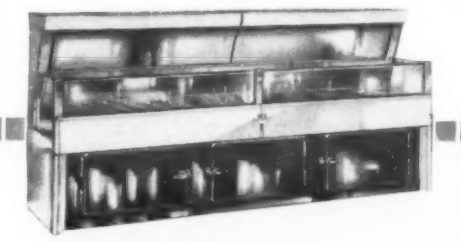
Double duty models 6 to 12 feet long and top display models 10 and 12 feet long. Every one is welded steel, with porcelain exterior and display. K-Beam lighting, Miraflex coils, triple-plate glass front, and heavy, solid insulation.



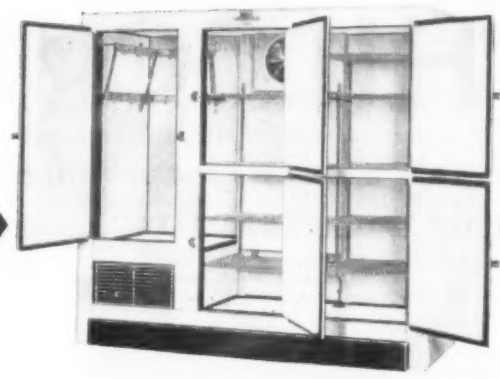
42 cu. ft. self-contained reach-in refrigerator with Dulux exterior, porcelain interior. Either glass or solid doors. Big, beautiful, and economical to own and operate.



A 6-ft. long self-contained case with compressor housing. Miraflex coiling, K-Beam lighting, and full porcelain exterior and display.



Open front 10-ft. long display case for self-service display of fresh pre-packaged meats, produce, dairy products, delicatessen, and bottled goods. All steel, inside and out.



A 65 cu. ft. self-contained refrigerator with unlimited use. Glass or solid doors. Profitable for storage and display of foods, bakery products, flowers, bottled goods, dairy products. Interior porcelain lined.

KOCH *Refrigerators* NORTH KANSAS CITY 16, MO. *Since 1883*

Write Koch today for details, open territories, and complete proposition.

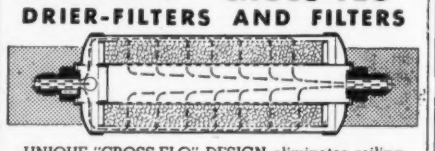
insist on genuine
Marlo
products
MARLO = HEAT TRANSFER
Since 1925

NEW SERVEL CONDENSING UNITS AT 10% LESS THAN FACTORY COST

Model No.	No. in Stock	H.P.	Price
H2NA1B	21	.3	$64.47
L2MA1B	3	.3	$65.84
H2EA1B	2	.4	$67.04
L2EA1B	1	.4	$67.57
LSU25F	2	Low ¼	$70.97
UB-25	2	Reg. ¼	$71.82
H2EA1C	23	.4	$71.84
UB-33	3	Reg. ⅓	$84.14
H2BA1C	13	.6	$92.34
UB-50	1	Reg. ½	$99.18
H2RA1C	4	.75	$129.24
ZB-75	1	Reg. ¾	$152.54
H4FA2A	2	1	$187.42

ALAMO DISTRIBUTING CO.
515 N. MAIN AVE. SAN ANTONIO, TEXAS

REMCO HEAVY-DUTY "CROSS-FLO" DRIER-FILTERS AND FILTERS



UNIQUE "CROSS-FLO" DESIGN eliminates roiling, dusting and packing of drying agent, which eliminates pressure drop, clogging, poor refrigerant control performance and expensive call backs—permits installation in liquid line, suction line or between refrigerant control and evaporator.

Ask Your Wholesaler Or Write

No. 1

REMCO, INC., ZELIENOPLE, PA.

Promotion Value of Demonstration Indicated by Successful Selling of New Type Monitor Washer, Distributorship Finds

DETROIT—Demonstration—as has been proved in the past—is a major key to successful specialty selling, and it again is being proved such today in the introduction of a new type washer, points out Frank Brady, executive vice president and general manager of the Welker Supply Co., appliance distributor here.

As distributor for the Monitor line, the company is pushing sales of the Monitor aerator washer, a little job for which big claims are made by both manufacturer and distributor, according to Brady.

Actively directing Welker's washer promotion is a veteran appliance man, C. H. "Jerry" Farrar, who a few months ago became sales manager of the distributorship.

Besides being small, the washer is claimed to introduce a new principle in washing action which not only speeds the process but does a better job, and sells for less, according to Brady and Farrar.

Standing 30 in. high, the washer is but 15 in. square and weighs 45 lbs. The stainless steel square tub at the top will hold about 8 gals. of water.

Major difference between this and conventional washers is that the agitator mechanism is mounted on the side of the tub rather than the bottom, and, as the Welker men further point out, it's not really an agitator but an aerator.

Washing action is caused not only by the movement of clothes through the water but also by bubbles of air sent through the clothes and water by the aerator mechanism, which, incidentally, has no gears.

Faster and cleaner washing are the chief claims being made for Monitor's aerator washer, so when C. H. "Jerry" Farrar, sales manager for Welker Supply Co., Detroit distributor, starts a demonstration (left), he asks Miss Martha Stevens to time it. "Two minutes," they agree (center), was all it took to wash some very dirty towels, and then Farrar winds up the demonstration (right) by putting the towels through the wringer. Demonstations like this are essential for promoting this new product, Farrar said.

Mounted atop the washer, and so designed that it can be folded inside when not in use, is the hand wringer.

Speed of the washing action is a major sales point being stressed. It is claimed that the washer will handle as much as 5 lbs. of clothes in 5 minutes or less.

Says Jerry Farrar, "I can walk into any store where there's one of our washers, wipe off the soles of my shoes with a towel, and then wash the towel in the washer in two minutes."

Introducing this machine to dealers was not too easy at first, recall Brady and Farrar.

"The big department stores weren't interested," said Farrar. "But I took a model over to the manager of one store's big service department and asked him to look it over. I had once worked there myself.

"The service manager soon had the machine all apart and reassembled, and then he washed some dirty coveralls. After that he called over the department buyer and urged him to take it on, because he was impressed with the machine's simplicity and ability," Farrar declared.

"This washer has to be demonstrated to sell on the retail level, too," he continued. "People who look at it won't believe it will do the job. And you have to have water in the washer when it's on display, but it doesn't matter whether it's hot or cold water."

Sale of Refrigerators, Freezers, and Ranges Up For Sept. In Penn Area

PITTSBURGH — Refrigerators, freezers, and electric ranges sold in greater volume during September in the southwestern section of Pennsylvania south of Pittsburgh than in any September on record, the West Penn Power Co. has reported.

However, the company noted, all three appliances moved more slowly than they did in August. Refrigerators were down 23% from August, home freezers were down 12%, and ranges were down 7%.

Clothes driers and room coolers were the only big ticket items to show gains over August. Room coolers were up 14% and clothes driers 35%.

Other major appliance sales were down as follows: dishwashers 41%, garbage disposers 24%, conventional washers 18%, automatic washers 15%, and water heaters 1%. Ironers maintained the August sales level.

Milk cooler sales were down 28% from August.

Dealer unit sales for September as compared with August and with September, 1947, were as follows:

Appliance	Sept. 1948	Aug. 1948	Sept. 1947
Refrigerators	1,661	2,177	1,461
Home Freezers	265	302	190
Room Coolers	16	14	15
Ranges	916	991	699
Garbage Disposers	28	37	19
Dishwashers	23	39	40
Clothes Driers	31	23	14
Ironers	255	254	334
Automatic Washers	275	325	372
Conventional Washers	1,572	1,923	1,353
Water Heaters	464	471	556
Milk Coolers	30	42	28

Coen Is Asst. Sales Mgr. Of American Central

CONNERSVILLE, Ind.—Promotion of Larry E. Coen to the post of assistant general sales manager, American Central Division, Avco Mfg. Corp., is announced by C. Fred Hastings, general sales manager.

Coen, who was formerly distribution manager, has been associated with American Central for five years and has been affiliated with the major appliance business for 20 years.

Before coming with American Central, Coen was the sales manager for Ebco Mfg. Co., and before that had been connected with the Kelvinator division of the Nash-Kelvinator Corp.

Westinghouse Sales Set Record, Income Declines

PITTSBURGH—Record high sales and declining income for the nine months ending Sept. 30, and a record electrical appliance production during the month of September have been reported by Westinghouse Electric Corp. officials here recently.

The sales record for the three quarters reached $711,275,535 as compared with $583,342,409 for the same period last year. Net income, however, was $33,546,345 this year, compared with $34,514,886 last year.

The production record was set at the company's Mansfield, Ohio, plant and was expressed in terms of 1,467 carloads of appliances shipped during the month. J. H. Ashbaugh, vice president, who made the announcement, also stated that Westinghouse expects to increase output of all its appliances next year.

Gwilym A. Price, president, asserted that for the nine months, Westinghouse received a return on total sales of 4.7% as against 5.9% on sales in the same period last year.

He blamed increased wages and higher prices for materials and services for boosting the cost of manufacturing company products by more than $45,000,000 per year. Only about half of this, he said, could be recovered in price raises.

New orders received during the first nine months this year totaled $822,729,940 compared with $744,797,608 a year ago. Unfilled orders on Sept. 30 were $730,934,046 compared with $715,566,792 on Sept. 30, 1947.

Robertshaw-Fulton To Make Controls for Rheem Products

NEW YORK CITY—Robertshaw-Fulton Co. has agreed to manufacture controls for the gas-fired water heaters, floor furnaces, and space heaters produced by Rheem Mfg. Co., it has been revealed here.

John A. Robertshaw, president of the controls manufacturing firm, said that his company has the capacity to handle the increased volume. He indicated that the agreement will add materially to his firm's sales and earnings.

G-E Credit Corp. Announces Allentown, Pa. Office Opening

NEW YORK CITY—Opening of an office at 824 Hamilton St. in Allentown, Pa., and appointment of James P. Courtney as manager has been announced by General Electric Credit Corp. here.

PHILCO FREEZERS

"WE HAVE MORE COMMENTS ABOUT PHILCO THAN ALL THE REST PUT TOGETHER."

Lewis A. Mills, Mundelain Locker Plant
Libertyville, Illinois

They are easier to sell—yes, that's why Philco Freezers ring the bell with so many locker plant operators. Philco has greater public acceptance—created by powerful, continuous national advertising. A Philco has the sell-on-sight features and conveniences that make buyers say "yes". In size and smart appearance . . . in care-free, automatic operation . . . it's the ideal home freezer. Many locker operators are adding plus profits to their business and promoting the frozen food *habit* in their areas by selling Philco Freezers. Take advantage of this opportunity now, by writing Philco Corporation, Philadelphia 34, Pa.

PHILCO FEATURES SELL ON SIGHT

- Patented 3-compartment design.
- Extremely cold center compartment—as low as 15° below zero.
- Counterbalanced lid.
- Built-in lock.
- Temperature Control and outside Thermometer.
- Guardian Bell, battery operated.

Wall WIRE PRODUCTS COMPANY
PLYMOUTH • MICHIGAN
Makers of
REFRIGERATOR SHELVES • STAMPINGS
FORMED AND WELDED PRODUCTS

Pro-Seal finish may be applied to any article made of basic wire. It is an especially attractive finish for Refrigerator Shelves.

Represent Valve Firm

ROSSNAGEL

WHEELER

* * *

Henry Shifts Wheeler And Appoints Rossnagel

CHICAGO—Roy C. Yantis, general sales manager of Henry Valve Co. here, has announced the transfer of Gordon W. Wheeler to the territory which includes northern Illinois, in addition to all of Wisconsin, Minnesota, and Iowa.

At the same time, Yantis announced the appointment of Berthold Rossnagel, formerly with the Crosley Div., Avco Corp., to take over the Ohio territory previously handled by Wheeler. Rossnagel will make his headquarters in the Dayton Biltmore hotel in Dayton, Yantis said.

Buffalo Forge Declares Stock Dividend of $1.30

BUFFALO—Directors of the Buffalo Forge Co. have declared a dividend of $1.30 a common share, payable Nov. 26 to stockholders of record Nov. 15. The last previous payment this year was 50 cents a share Oct. 28.

The November dividend distribution will raise total dividend disbursements on the stock so far this year to $3.75 a share. Total dividend payments in 1947 amounted to $4.45 a share.

Building Owners Fight Proposal To Amend Buffalo Boiler Law

BUFFALO — Representing the Main Street Association and other building owners, Joseph Davis, heating and air conditioning engineer, appeared before the Common Council legislation committee to oppose amendments to the city boiler ordinance which would require building owners to hire licensed engineers to operate low-pressure boilers.

Davis said "if the proposed amendments go through, it would cost building owners a considerable sum of money to employ licensed engineers."

Hill Quits NEWA Post To Form Consulting Firm

NEW YORK CITY—Robert C. Hill has resigned as director of the Appliance Division of the National Electrical Wholesalers Association to form the management consultant firm of Bob Hill & Associates.

The firm will serve the electrical appliance distributive industry at both wholesale and retail levels.

Hill has been identified with the electrical industry for more than 25 years. He has specialized in merchandising and management in all branches of the industry. When NEWA created its Appliance Division, he was appointed director.

Blythe Holds Formal Opening

CHICAGO—The H. W. Blythe Co., refrigeration parts wholesaler here, has announced that the formal opening of its new quarters at 529 N. Milwaukee Ave. was held on Oct. 29. New telephone number for the firm is Taylor 9-3127.

58% of Wholesalers In Three States Found Violating Wage & Hour Law

CLEVELAND — Fifty-eight per cent of the wholesale establishments in Ohio, Michigan, and Kentucky inspected during fiscal year 1948 had violated one or more of the major provisions of the Fair Labor Standards Act during the two years covered by the inspections, according to William S. Singley, regional director of the Wage and Hour and Public Contracts Divisions, U. S. Department of Labor.

Major provisions of the act are those requiring the payment of a minimum wage of at least 40 cents an hour and payment of time and a half the regular rate of pay for all hours over 40 in a workweek, and that restricting child labor.

Fifty-four per cent of the 756 establishments inspected in the three states had run afoul of the overtime provision, 4% had violated the minimum wage provision, and 1% the child labor provisions.

"Violations of the overtime provision resulted primarily from the practice of paying a flat salary without regard for the number of hours worked," Singley said.

"It is erroneous to assume that a worker is exempt from the overtime provision of the act simply because his employer pays him on a salary basis. The duties of an employe as well as the amount of salary must be considered in determining the applicability of exemptions."

The Fair Labor Standards Act, known generally as the Wage and Hour Law, applies to workers engaged in interstate commerce or in the production of goods for interstate commerce.

Singley pointed out that employes of intrastate wholesalers who order goods from out of state sources, write the letters, keep the books, place such goods on shelves or in storage bins, check the goods against invoices and make payments for such goods, are also covered by the act.

Ingersoll Home Units Used In Arizona Project

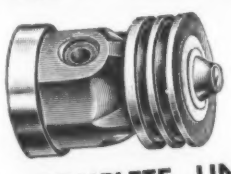
PHOENIX, Ariz.—First Arizona installation of the Borg-Warner Ingersoll home unit has been made recently in 39 homes of a new subdivision here. The Ingersoll unit is a pre-fabricated assembly that includes all plumbing and electrical connections for house heating, hot water tank, kitchen appliances, and bathroom fixtures.

The unit is shipped in a single package by the manufacturer and set up in a special compartment.

Central Service Distributes Redmond, Universal Products

SYRACUSE, N. Y.—Appointment of Central Service Supply Co., refrigeration parts wholesaler here, as distributors of the Redmond Micro-Motor line and the Universal Cooler hermetic unit line from ⅛ to ½ hp., has been announced by Ted Glou, president.

SPECIFY DELAVAN WHEN YOU NEED PISTONS



A COMPLETE LINE OF COMPRESSOR REPLACEMENT PARTS

DELAVAN MANUFACTURING COMPANY
3009 SIXTH AVENUE
DES MOINES 13, IOWA

"Detroit" Thermostatic Expansion Valves offer EXCEPTIONAL RELIABILITY AND LONG LIFE

Veteran Valve Serves 17 Years

This "Detroit" No. 663 Bellows Type Thermostatic Expansion Valve served 17 years without trouble in an apartment refrigeration plant. It is in operating condition today.

Photo Courtesy of Universal Cooler Company of Canada, Limited

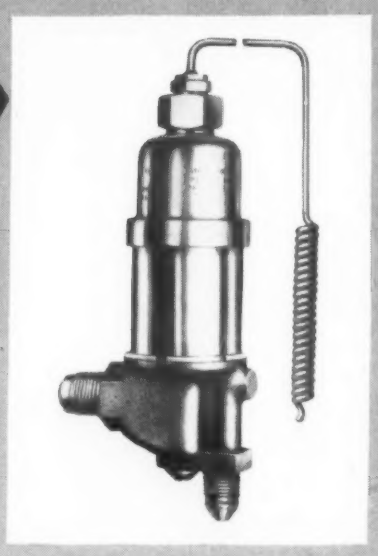
Year after year "Detroit" Thermostatic Expansion Valves stay on the job—give reliable, trouble-free service—rarely require servicing or replacement.

Here is a veteran which shows what "Detroit" expansion valves can do. This No. 663 Thermostatic Expansion Valve controlled refrigeration in an apartment house for 17 years before system changes brought about its retirement.

During that time, it gave no trouble—required no attention whatever. It is in operating condition today.

No. 673—Another Record Maker

"Detroit" No. 673, the modern counterpart of No. 663. It has made, and is making, records of reliability on countless installations.



No. 673
The Modern Counterpart

"Detroit" No. 673 Thermostatic Expansion Valve is the modern counterpart of this veteran. It has the same built-in durability and reliability. In countless installations, it is making valve history. Among Thermostatic Expansion Valves, it is "the standard of the industry." "Detroit" Gas-Charged Thermostatic Expansion Valves provide better control—longer, trouble-free service.

5172

DETROIT LUBRICATOR COMPANY

DIVISION OF AMERICAN RADIATOR & Standard Sanitary CORPORATION

General Offices: 5900 TRUMBULL AVENUE, DETROIT 8, MICHIGAN

Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"DETROIT"
"DETROIT" HEATING AND REFRIGERATION CONTROLS • ENGINE SAFETY CONTROLS • FLOAT VALVES AND OIL BURNER ACCESSORIES "DETROIT" EXPANSION VALVES AND REFRIGERATION ACCESSORIES • STATIONARY AND LOCOMOTIVE LUBRICATORS

Serving home and industry
AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON

Specify
DAVISON PA 100
refrigeration grade
SILICA GEL
in factory-charged dryers bearing this label or in bulk for refilling
CHARGED WITH DAVISON'S SILICA GEL REFRIGERATION GRADE
PA 100 is your guarantee of all-around, superior performance
SEE YOUR JOBBER

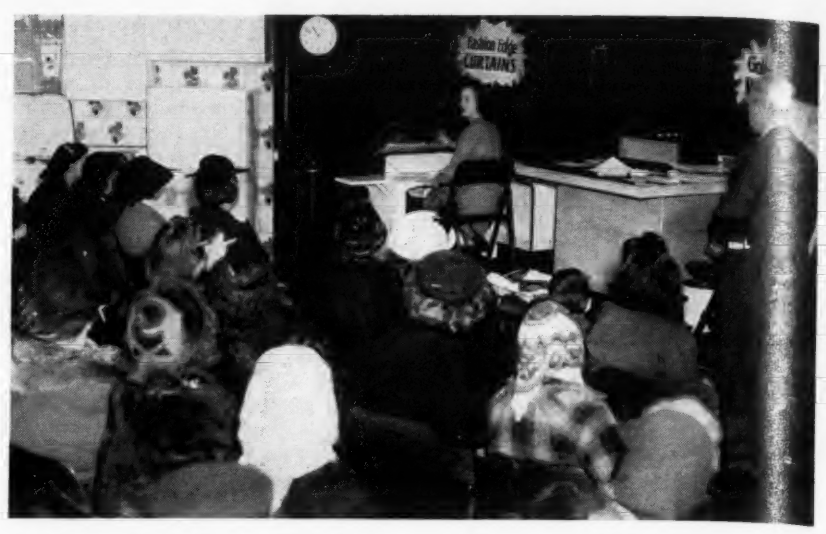
insist on genuine
Marlo
products
MARLO = HEAT TRANSFER
Since 1925

Kelvinator
MADE BY EBCO MANUFACTURING CO. COLUMBUS, OHIO U.S.A.
Cooling Cure for Thirsty Throngs
Sell the name that sells itself . . . with Kelvinator-refrigerated Electric Water Coolers. Sizes and models for every requirement. Write.
The EBCO Mfg. Co.
TOWN and LUCAS STS.
Columbus 8 Ohio

'Lady Luck' Radio Quiz Show Draws 100 Women A Day Into Dealer's Store

Ken Ash, master of ceremonies, ribs and boosts the appliances sold by the W. H. Cranton Co. to the delight of the more than 100 early morning shoppers attending the dealer's "Lady Luck" quiz show.

* * *



After the broadcast is over, many women stay behind to watch product demonstrations put on by the store's salesmen. Each woman in the audience is a registered prospect.

Thousands Tune In, Then Open Their Doors To 'Four Leaf Clover' Appliance Salesmen

HAVERHILL, Mass.—A radio quiz show for women staged five days a week in its appliance showroom has proved to be an excellent prospect getter for the W. H. Cranton Co. here.

Not only has the "Lady Luck" show drawn more than 100 women into the store for each broadcast, but it has caught the ears of from 2,000 to 10,000 local housewives each day.

After hearing the program's theme song, "I'm Looking Over a Four Leaf Clover" each morning on their radios, housewives are quite receptive to salesmen wearing enlarged replicas of a four leaf clover in their lapels when these salesmen knock on their doors, the company has learned.

The program, with humorist Ken Ash as master of ceremonies, followed the popular "give-away" quiz theme. Daily winners were treated to a dinner for two, corsages, and a gift of $10 worth of food. Grand prize winners each were were awarded General Electric electric blankets.

Those attending the broadcast were required to register and then their names were placed on prospect lists for company salesmen.

Ash, during the program, gave straight and humorous boosts for the General Electric appliances displayed in the store. After the program was over, salesmen and home economists conducted demonstrations on any appliances in which the women showed interest.

The half-hour programs were broadcast over local station WHAV at 10 a.m. to catch the early morning shoppers. At first, the Cranton company had scheduled the program for Monday through Friday.

Realizing, however, that a large number of Saturday shoppers were being missed by this schedule, the company changed it to Tuesday through Saturday.

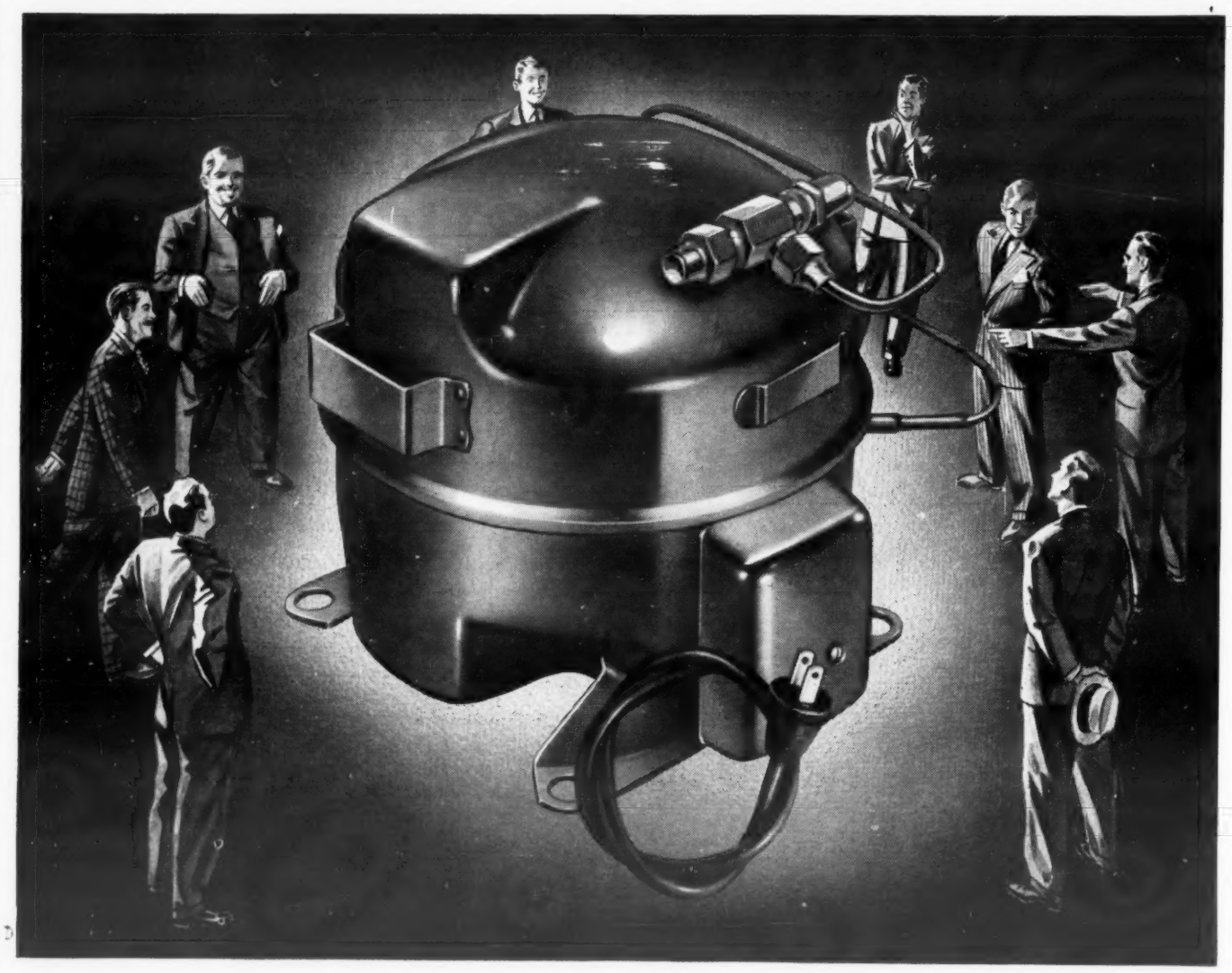
The wisdom of this move was demonstrated by tripling the store traffic on Saturdays. In addition, surveys indicated that 10,000 listeners tuned into the program on Saturday mornings as compared with only a quarter of that number on Wednesdays, the poorest listener day.

Capitalizing on the success of the program which drew listening audiences of this size in a town of 48,000 population, the store plugged the program both in newspaper advertising and in spot radio commercials.

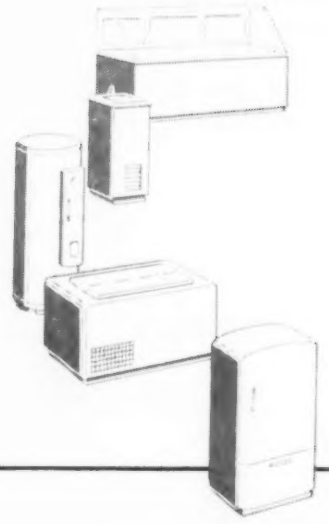
The four leaf clover in his lapel identifies this Cranton salesman to a Haverhill, Mass. housewife and "Lady Luck" fan.

Remodeled Duke Cycle Opens

TORONTO, Ont., Can.—Duke Cycle & Radio has reopened its completely remodeled appliance store at 625 Queen St., West. Selling area has been increased substantially.



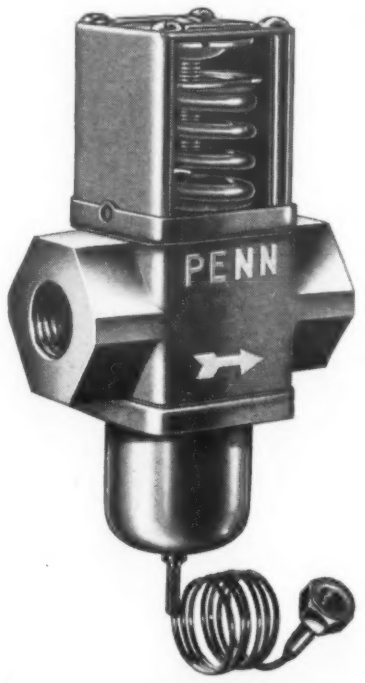
Looks good from all angles!



No matter how you look at Tecumseh Hermetic Compressors . . . whether with an eye for design, engineering, construction, or high operating efficiency . . . you'll find them clear-cut leaders on all counts for any application within their range. They're smooth, quiet, dependable in operation . . . precision built throughout to assure long-life, trouble-free performance. And important, too, from a cost point of view, they're available to manufacturers of complete products, or they can be supplied on high-sides or incorporated in completely sealed systems. So get the facts . . . all the facts on Tecumseh Hermetic Compressors. Single and twin cylinder models . . . ⅛ to ½ horsepower . . . Freon 12 or Freon 22 . . . for a wide range of domestic and commercial applications. Write today for complete information.

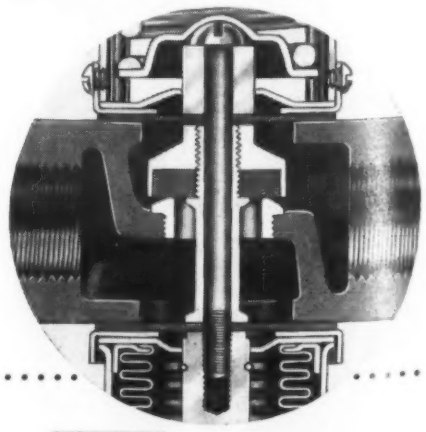
Chieftain
TECUMSEH PRODUCTS COMPANY
Tecumseh, Michigan
EXPORT DEPARTMENT • 2111 Woodward Avenue • Detroit 1, Michigan
THE WORLD'S LARGEST INDEPENDENT PRODUCER OF COMPRESSORS AND CONDENSING UNITS FOR THE REFRIGERATION INDUSTRY

SWITCH TO PENN FOR DEPENDABLE WATER VALVES



It's the simplified design of PENN 246 Water Valves which contributes so much to their dependability and long life. Examine the cross section below—note that water cannot come in contact with the range spring and sliding parts. Protected from sedimentation . . . corrosion . . . and rust, which cause premature wear and failure, these *better* valves assure better performance through the years.

Switch to Penn for dependability . . . on your next refrigeration job specify and buy the PENN 246. They're built in threaded and flanged styles—in a wide range of sizes to meet your specific need. Send now for Bulletin R-1986-B. **Penn Electric Switch Co., Goshen, Ind.** Export Division: 13 E. 40th St., New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ontario.



PENN
AUTOMATIC CONTROLS
FOR HEATING, REFRIGERATION, AIR CONDITIONING, ENGINES, PUMPS AND AIR COMPRESSORS

'Salestrania' Winner

V. J. Corsaro, sales manager, Graybar, Rochester, N. Y. (center), is sworn in as "president" for winning "salestrania" contest for distributors sponsored by Hotpoint, Inc. Officiating at the "inaugural" ceremonies are Leonard C. Truesdell, vice president of marketing, Hotpoint, Inc. (left), and Edward R. Taylor, merchandising manager. Corsaro takes office with right hand on training meeting facts book which served as "bible."

* * *

Graybar, Rochester Wins Top Honors In Hotpoint's Sales Training Contest

CHICAGO—Graybar, Rochester, N. Y., won top national honors in a sales training organization contest for distributors sponsored by Hotpoint, Inc., the manufacturer has announced.

Awards were based on the number of dealers and their retail salesmen attending the product knowledge meetings and on the number of training kits sold by the distributor.

The Rochester distributor had 100% meeting coverage of dealers in that territory, and sold dealers and retail salesmen 416 training kits.

At a special luncheon here Leonard C. Truesdell, Hotpoint's vice president of marketing, presented cash awards to these top national winners, all of Graybar, Rochester: V. J. Corsaro, sales manager; P. V. Batt, sales promotion manager; A. E. Caschette, wholesaleman; and K. L. Thielscher, district manager.

Hotpoint national winners were L. E. Loveland, Great Lakes district manager, and H. B. Cromleigh, Atlanta district sales manager.

Distributors were divided into two groups competing to elect "slates" of candidates for top national honors. Winners were chosen by total "votes" which were based on points for each activity successfully carried out.

Penn Power Will Resume Appliance Merchandising

ALLENTOWN, Pa.—After a seven-year absence from the field, Pennsylvania Power & Light Co. will resume the merchandising of electrical appliances, a spokesman for the utility said.

For the present, the utility will confine the display of merchandise to 10 of its more than 50 outlets, the spokesman stated. The company had been merchandising appliances from the time of its formation in 1920 until the outbreak of the war.

The utility reportedly refrained from re-entering the field until now so that it would not reduce the limited amount of appliances available to dealers. But since supply and demand are now in closer balance, the company feels that retailers will once more be benefitted by its merchandising program.

As before, the utility's program will involve cooperation with dealers.

New Philco Service Sales Kit Has Consumer Messages

PHILADELPHIA — A refrigerator service sales kit containing 2,000 service messages to consumers is being offered to dealers by the Philco Corp. here.

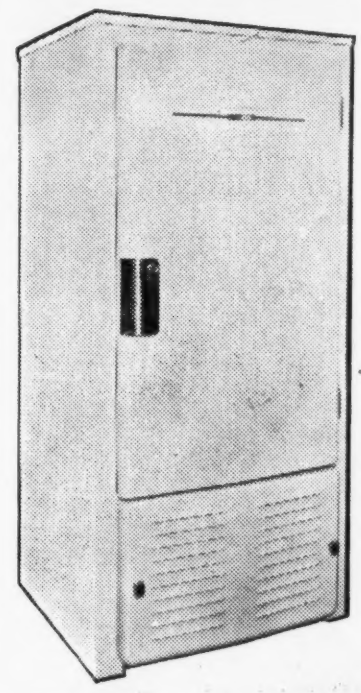
The kit includes 500 letterheads and an equal number of blotters, envelope inserts, and business cards, all emphasizing that the dealer is "Philco Service Headquarters" in his community.

SANITARY'S NEW

6 cu. ft. and 4 cu. ft. Electric Refrigerators are now available.

No. TE62 Illustrated—
23½"w. x 22¾"d. x 50½"h.

Also Available—Model TE46—
4 Cu. Ft. Size—
23½"w. x 20¾"d. x 41"h.



SANITARY REFRIGERATOR COMPANY
FOND DU LAC, WISCONSIN
ICE REFRIGERATORS FOR MORE THAN 40 YEARS
QUICFREZ FARM LOCKER PLANTS SINCE 1939

Lura Jim Alkire Manages G-E Consumer Institute

BRIDGEPORT, Conn.—Miss Lura Jim Alkire has been appointed manager of the General Electric Consumers Institute, A. J. Brock, manager of sales services for the company's appliance and merchandise department, has announced.

Miss Lura J. Alkire

In her new position, Miss Alkire is responsible for a broad program of basic food research and an extensive consumer information program designed to disseminate practical solutions to homemaking problems.

Miss Alkire joined the Consumers Institute as a senior home economist specializing in refrigerators and home freezers in 1947, and was named acting manager of the institute last April. A graduate of Southwest State Teachers college, she was formerly a home economist for the City Public Service Board of San Antonio, Tex.

Distributor's Open House Marks End of Remodeling

BIRMINGHAM, Ala. — Steel City Supply Co., Inc., of Birmingham, recently held open house following completion of remodeling work which was begun last December following purchase of the building.

Steel City Supply is Crosley distributor for the states of Alabama and northwest Florida.

The distributing organization is headed by Robert F. Hall, president and chairman of the board of directors; J. W. Hamilton, Jr., vice president; Lee D. Marbury, sales manager; and A. C. Ogle, service manager.

Elliott-Lewis Distributes Universal In Phila. Area

PHILADELPHIA — The Elliott-Lewis Corp. here will take over exclusive distribution of Universal major appliances in the Philadelphia area, it has been announced.

The Universal lines, manufactured by Landers, Frary & Clark, were previously distributed by Suppiee-Biddle Co. and Graybar Electric Co.

Paxton & Gallagher Ups Capital

OMAHA, Neb. — Paxton & Gallagher Co., regional distributor for Admiral appliances, has notified the Nebraska secretary of state of an increase in its authorized capitalization from $3,000,000 to $6,000,000.

F. & K. Appliance Files Name

BUFFALO—A business name has been filed in the Erie County clerk's office for the F. & K. Appliance Repair, 65 Hayden St., Buffalo, by Richard E. Karjewski and Stanley J. Frydrych.

'Cannon Brigade' Blitzes Customers with Towels, Loads Dealers with Sales and Good Prospects

SOUTH BEND, Ind.—The Bendix "Cannon Brigade" has "created more consumer sales in a shorter period of time than any recent Bendix promotion," according to Joseph L. Armstrong, national merchandising manager for Bendix Home Appliances Inc.

During the campaign, Cannon bath towels were given away to persons who watched a demonstration of the Bendix automatic washer with the automatic soap injector. Dealers purchased 1,286,700 towels—far more than the million at first earmarked for the promotion, according to Armstrong.

Incomplete returns showed that an average of 15 washers, dryers, or ironers was sold by participating dealers. Armstrong said the figure would rise substantially as prospects were followed up.

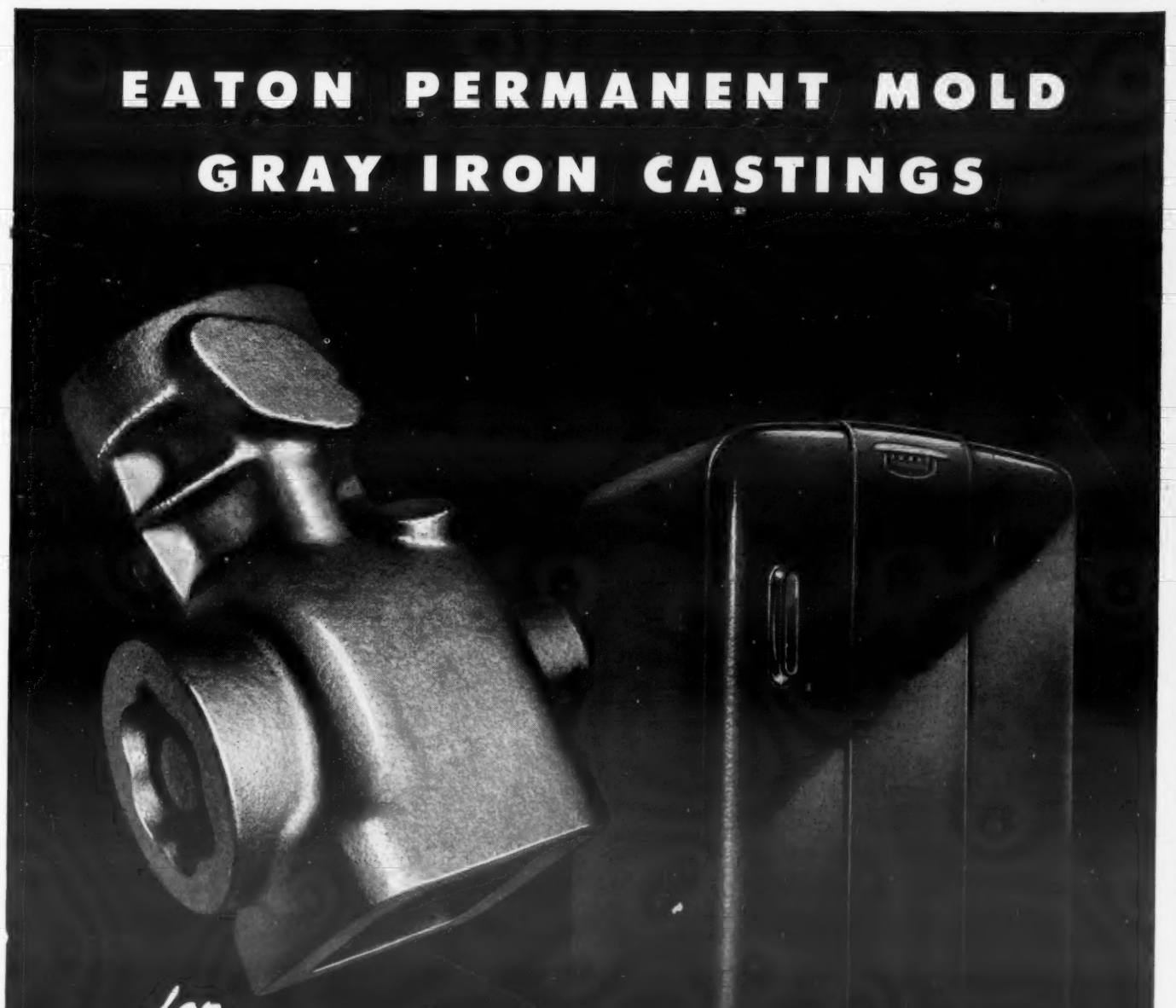
In reports filed by distributors, dealers reported a ratio of four prospective purchasers for every 25 towels given away.

Modern Home Appliance at Shrewsbury, Mass. sold three Bendix automatic washers with the last four towels given away. Sam's Auto in Norwood, Mass. said seven customers came in for a free towel as the promotion window was being installed. With those seven towels the dealer sold six Bendix washers.

Wilson & Fields, Inc., San Bernardino, Calif., reported 226 towels given away to bona fide potential customers "with eight Bendix washers sold and 46 appraisals to be made on future dates." Also "A blind man sat through the Bendix demonstration, got his towel, and though he didn't seem a likely prospect for a Bendix, he did buy $150 worth of mattress and box springs from my furniture department."

Southern Appliances, Inc., noted that Tire Sales Co., at Burlington, N. C., demonstrated to 1,500 persons in two days, with resulting immediate sales of 20 washers, five dryers, and three ironers.

EATON PERMANENT MOLD GRAY IRON CASTINGS



for Refrigeration Parts

Free machinability, dense non-porous structure, freedom from leakage under pressure, freedom from distortion, and ability to take a mirror finish—these qualities recommend Eaton Permanent Mold Gray Iron Castings for many critical parts in refrigerator, air conditioning, and domestic appliance production.

Eaton Foundry Division engineers will be glad to discuss the application of Eaton Permanent Mold Gray Iron Castings to your product. Send for your copy of the illustrated booklet, "A quick Picture of the Eaton Permanent Mold Process for Producing Gray Iron Castings".

EATON
MANUFACTURING COMPANY
FOUNDRY DIVISION
9771 French Road · Detroit 13, Michigan

They'll Do It Every Time . . . . By Jimmy Hatlo

THE SMOKE IS TERRIBLE IN HERE — IF WE DON'T GET SOME FRESH AIR WE'LL ALL PASS OUT—
OH-OH- NIP AND TUCK ARE AT IT AGAIN—TO THE BOMB SHELTER, FOLKS—
I'M GONNA GET MY OVERCOAT FOR ME AND THE FIRST-AID KIT FOR THEM—
THAT GUY CAN'T STAND SMOKE, BUT DID YOU EVER GET A WHIFF OF THAT LINIMENT HE USES—?
AND IN THE SUMMER HE WANTS THE WINDOWS ALL CLOSED—
JUST BEFORE THE BATTLE, MOTHER— OR SMOKE GETS IN YOUR HAIR— Thanx TO THOS. J. CUNNINGHAM, 160 VARICK ST., N. Y. CITY
JIMMY HATLO
Z-1
COPR 1947, KING FEATURES SYNDICATE, Inc., WORLD RIGHTS RESERVED

Do You Have 'One Foot In the Door'?

CURVETTE *Unit Cooler*

LOW COST Extreme low price is the result of mass production. The unique design gives maximum capacity per unit of space.

WELL MADE Complete unit constructed of aluminum and copper. No rusting. The motor is totally enclosed, permanently lubricated, requiring no oiling.

EFFICIENT The radial airflow assures uniform, refrigerator temperature.

SEND FOR CATALOG R-125.

KRAMER TRENTON CO. *Trenton 5, N. J.*

THERMOBANK - COOLMASTER - RADIAL UNITS - PANEL UNITS - CUBERS - FINNED COILS - BARE TUBE COILS - HEAT INTERCHANGERS - CONDENSERS Air Cooled Water Cooled Evaporative - WATER COOLING EVAPORATORS - BLAST COOLING COILS - BLAST HEATING COILS

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark registered U. S. Patent Office; Est. 1926

AIR CONDITIONING AND REFRIGERATION News

Copyright 1948, Business News Publishing Co.

F. M. COCKRELL, *Founder*

Published Every Monday by BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $5.00 per year; 2 years $8.00. All other foreign countries: $7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

GEORGE F. TAUBENECK
Editor and Publisher

PHIL B. REDEKER, *Editorial Director*

C. DALE MERICLE, *Associate Editor*

JOHN SWEET, *Assistant Editor*
HUGH MAHAR, *Assistant Editor*
GEORGE HANNING, *Assistant Editor*
ROY DENIAL, *Assistant Editor*
Editorial Assistants: MARGARET DEAN, MARGARET POMMERENING, AND LORRAINE MAJOR.

E. L. HENDERSON, *Business Manager*
ROBERT M. PRICE, *Adv. Representative*
ALLEN SCHILDHAMMER, *Adv. Rep.*
ALLEN S. RUSSELL, *Adv. Rep.*
BETTY JANE KING, *Adv. Secy.*
YVAUGHN CRYSLER, *Subscription Mgr.*
WALTER J. SCHULER, *Production Mgr.*

Member, Audit Bureau of Circulations. Member, Associated Business Papers.

VOLUME 55, NO. 12, SERIAL NO. 1,027, NOVEMBER 22, 1948

Breakdown of the 'Triangle'— The 'Why' of Canada's Dollar Restrictions

CANADA is prospering, but its "working capital" in foreign exchange is relatively low. Normally the Dominion exports heavily to Europe, while its imports come largely from the U.S.A. —so American dollars are its great need.

These dollars are hard to come by in exchange for exports to Europe, so the Dominion of Canada has had to conserve its supplies of dollars by regulating its imports, especially those from the United States.

This has been a particular hardship on citizens of "Maple Leaf Land" because Canadians have no normal propensity to import American goods when things are prosperous, as they are now. It is the breakdown of the pre-war North Atlantic triangle of international exchange which has caused the trouble.

To meet this situation the Dominion has adopted a four-part program, which works out as follows:

(a) an effort to improve its export position, particularly with dollar countries, and this position is improving;

(b) the limitation of travel by Canadians—cutting down traveling expenses into dollar areas, except on business, to $150 a year;

(c) restriction on imports, particularly from dollar countries; and

(d) a loan from the Export-Import Bank.

For control purposes, imports are divided into consumers' goods and capital goods, and consumers' goods imports from "dollar countries" are limited to a certain percentage of the value of such imports in the pre-war years.

For example, imports of citrus fruits have been reduced to 50% of those of 1947. Before these limitations were instituted, the Dominion of Canada was losing $70 million a month in its dollar balance, and would have been out of American dollars entirely in six or seven months had this situation persisted.

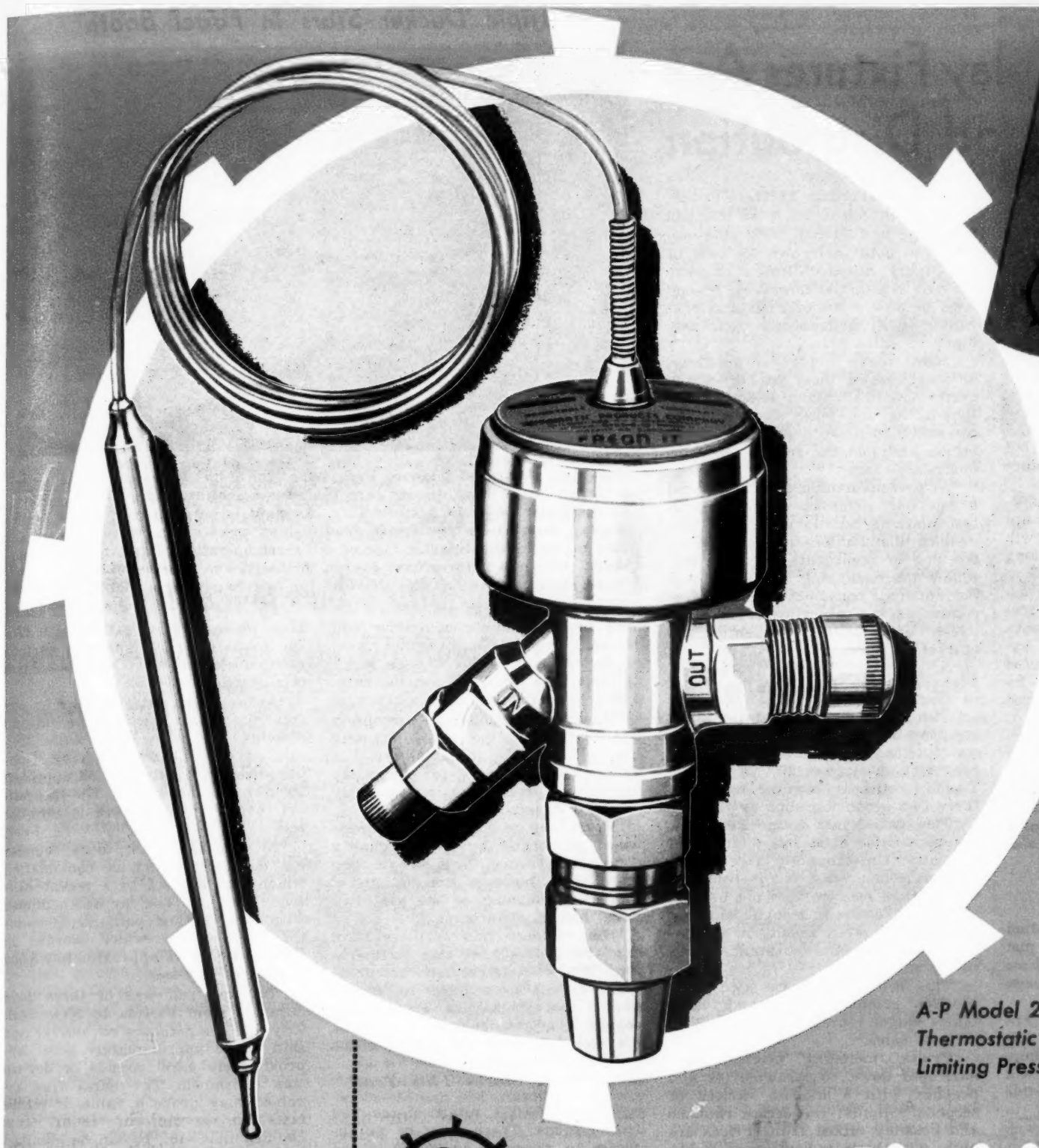
Canada has now reversed this process, and is building up its dollar reserves at the rate of $20 million a month. This favorable turn of events does not include the effect of the loan secured from the Export-Import Bank.

Presently, Canada is making appreciable headway in restoring its U. S. dollar reserve—the latter fund having increased from a low of $461 million in December, 1947, to $742 million on June 15, 1948. This last figure includes borrowings from the Export-Import Bank loan of $140 million. Even after deducting that figure, there's still a gain of $141 million.

Canada's administration of the import controls of capital goods is handled by the issuance of two types of permit — covering single shipments of an intermittent nature; and an "allotment permit" covering importations which follow a specific recurring pattern.

Individual permits are not granted if suitable equipment can be obtained from Canadian sources, nor unless the end use of the imported goods is considered essential to the national economy.

Businessmen in Canada predict that it won't be long before normal trade relations can be restored between their great country and ours. And that will be a moment for mutual rejoicing.



Simplify your service... Improve Refrigeration efficiency with DEPENDABLE VALVE

Here's Valuable Overload Protection

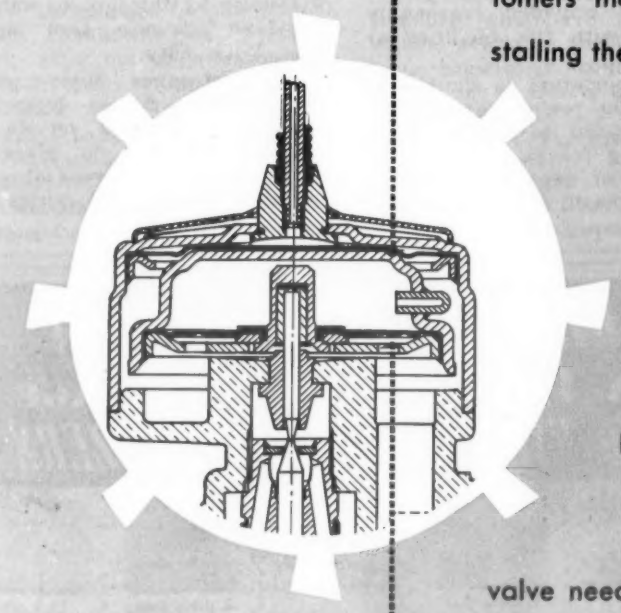
FOR YOUR ½ TO 1-TON SYSTEMS

A-P Model 212 Adjustable Superheat Thermostatic Expansion Valve with Limiting Pressure Feature.

Pressure Limiting Model 212

THERMOSTATIC EXPANSION VALVES

Whenever motor overload is indicated at peak load or during pull down on any system, you'll offer your customers money-saving "performance Insurance" by installing the *pressure limiting* A-P Model 212 Thermostatic Expansion Valve. It will save excessive strain on the motor and even expensive breakdowns.



In addition to the sensitive large-area diaphragm typical of all A-P Valves, the Model 212 has an exclusive and entirely new diaphragm unit which limits operating suction pressure to a predetermined setting. If suction pressure becomes excessive, this diaphragm opposes the main diaphragm action, allowing valve needle to move towards the closed position, until the overload condition has passed. Then the valve reverts to normal operation, controlling superheat through the thermostatic bulb and main diaphragm, with its usual accuracy and dependability.

Model 212 can replace any standard thermostatic expansion valve of ½ and 1-ton Freon 12 or Methyl capacity, and has the usual adjustable superheat range. It is liquid charged and thus mounts in any position or ambient temperature without affecting bulb control-accuracy It is available to limit pressures at 15, 40, and 55 lbs. Freon 12, and 10 and 30 lbs. Methyl. Model 211 with fixed superheat, same capacity, is also available. Your wholesaler stocks and sell them. Write for bulletin No. E-156.

AUTOMATIC PRODUCTS COMPANY

2450 North Thirty-Second Street • Milwaukee 10, Wisconsin

Export Department, 13 East 40th Street, New York 16, N. Y.

DEPENDABLE REFRIGERATION VALVES

STOCKED AND SOLD BY GOOD REFRIGERATION WHOLESALERS EVERYWHERE . . .
RECOMMENDED AND INSTALLED BY LEADING REFRIGERATION SERVICE ENGINEERS

From the Food Distributor's Viewpoint:

Good Low Temperature Display Fixtures Are Still Bottleneck In Frozen Food Distribution

CHICAGO — "Low temperature store display fixtures still are regarded as the bottle-neck in distribution (of frozen foods) and do affect expansion at the point of sale," W. Loren Pavlovski, frozen food manager for Beatrice Foods Co. here, told members of the Chicago section of the American Society of Refrigeation Engineers recently.

Pavlovski asserted that the solution to the problem of providing a satisfactory, retail-minded display case is a project for refrigerating engineering design. "The objective," he said, "is a reach-in type fixture with merchandise readily accessible between knee and shoulder levels."

Pavlovski discussed this problem as part of a comprehensive survey of the present status of the frozen food industry, with particular reference to frozen food distributors, that he presented in an address before the local group.

His survey covered the evolution of quality commercially frozen foods, the refrigerated transportation picture, the hesitancy of distributors and cold storage warehousemen to invest heavily in the field, and a series of do's and don'ts on merchandising the frozen product.

In discussing low temperature merchandising fixtures, he noted that two types are in use. They are: "(1) the covered chest or coffin, in which the merchandise is not exposed to full view and even when the covers are off, must be reached down for, and (2) the open top.

"In addition there is the slot or gravity dispenser, which has a few supporters. All that can be said for the two leading types is that the open-top display outsells the coffin by a substantial margin.

"Chest type cases were first on the market and even since the advent of open-tops, have maintained a lead. The reason is price, $750—$1,000 whereas open-tops are approximately $1,500.

"There is need for equipment which will be more convenient to the consumer. Reach downers, even among open-tops, are undesirable and lose sales. Consumers cannot be expected to enjoy frozen foods shopping enough to reach arm's length and more for a package.

"More often than not, when the deep consumer dive is required, she will not come up with the dived-after-item because the bottom of the case is seldom in orderly array.

"Solution? That is a project for engineering design. The objective is a reach-in fixture with merchandise readily accessible between knee and shoulder levels. Dairy type wall cases? Three-level produce style? Possibly a refrigerated produce rack?

"Automatic defrosting is a requirement regardless of type. No one, apparently, has the answer, but it will be found and we hope not too long away.

"Two seasons ago," Pavlovski asserted, "the comparatively young frozen foods industry was faced with serious and costly liquidation of excess packs, poor quality, and limited retail outlets. A bubble inspired by war conditions burst but it resulted in an industry house cleaning.

"Quality is up; prices of quality packers have been held in check; production reduced in line with distributive facilities; market areas were carefully selected for development. Best of all, the get-rich-quick element among so-called packers was frozen out of business.

Can Be No Bargains

"True, some questionable product is still to be found but this is just about over with. What little there may be is better fit for garbage than for sale.

"Nevertheless, there are some important local distributors and retailers who think in terms of ridiculously low consumer prices, who will realize there can be no bona fide frozen food bargains—bargains in the 10 cents per package line. Even a 19 cents retail on any fruit or vegetable of half-decent quality is out of the question on current costs of raw material and distribution.

"Pre-cooked foods did not stand up and are conspicuous by their virtual absence. Standbys such as chicken a la king and French fried potatoes, not only held their own as part of top-quality branded lines. but have enioyed substantial increases. French fries became a maior item and next winter will undoubtedly set new highs in sales.

"Meats have made no headway, although major meat packers know pretty much all about how to do a job, if, as and when they may be compelled to make a product contribution and join the frozen foods industry.

"At present hamburger patties and a few odd items have appeared in test markets but do not follow any definite distribution pattern. Quick freezing of meat cuts may one day follow pre-packaging of fresh meat but not until consumer demand overcomes packer objections—many of which are justified—to enter the market.

Fish, Poultry Up Volume

"Fish fillets and eviscerated poultry have made rapid strides. In large metropolitan distributorships these represent upwards of 20% of volume. Too few retailers, however, capitalize these two product groups as yet.

"Pies, bread and dough items enjoy reasonable sales but distribution is spotty. Unfortunately, freezer life is short when yeast is involved and the average retailer does not provide the care required. Rough handling by shoppers often results in unsaleable packages and substantial loss to the store.

"This brings us to the two basic product groups: fruits and vegetables which represent 75%, to 85% of total sales.

"Fruits, including berries, have narrowed down to strawberries and peaches with a modest variety of secondary items: rasberries, rhubarb and possibly mixed fruit. Prices are high, with little indication of weakening, resulting in a levelling of sales volume to approximately 15% of all sales.

"Vegetables show the greatest volume increase and account for nearly 65% of distribution. Peas have been the mainstay, followed closely by snap beans (cut green, French cut and wax) and these being pushed by spinach. Mixed vegetables, cut corn, asparagus, limas, broccoli, carrots and peas, cauliflower, Brussels sprouts, squash and succotash complete the list of good sellers.

Orange Juice Top Seller

"Orange juice concentrate is very much in the picture. In fact, it was pointing toward top selling position, when supply fell behind demand.

"Florida Valencia juice came through in what was thought to be adequate quantities. California juice was to follow in. Florida concentrate sold out and California production fell down, because of a poor crop, which provided small fruit of low acid content. Known brands are more or less in the same boat and will rely upon allocation or very short supplies until the next Florida pack.

"Barring conditions beyond brand owners control, 1949 should see orange juice concentrate again high among frozen foods sellers and probably outselling all other items.

"The frozen foods business has recovered and is going ahead in a healthy manner. Packers and bankers have become more marketwise and are neither overestimating nor overproducing. Last season's pack is an example, 700 million pounds compared to one billion two years ago.

"However, national consumption last year was 5 lbs. per capita and may well exceed 6 lbs. this year. The industry's principals are adequately financed on well advertised, publicly accepted brands.

"From now on it will be a business based on brand merits of quality and value. Frozen foods people who know their business are optimistic. The house-cleaning of the past two years helped all around.

"Householders and farmers have approximately 400,000 zero refrigerators in use. Refrigerator manufacturers expect to sell up to a half million more this year. It does not require a crystal gazer to see what lies ahead in frozen foods progress.

50% More Stores This Year

"Nearly 60,000 retail stores sell frozen foods. There may be an increase to as many as 90,000 in the current pack year. These stores will require supplies.

"Modern packaging, consistant national and local advertising, good newspaper, magazine, radio, and publicity are helping to create more frozen foods consumers. Several millions of dollars will be spent this season by five leading packers in doing the advertising, publicity, and promotional job.

"Engineering and the mechanics of allied industries, principally transportation and cold storage warehousing, have provided reasonably good service with the facilities at their disposal.

"Rail transportation is limited to less than 2,000 reefer cars. These are not restricted to frozen foods alone. Allowing for cars not operating because of repairs there are probably less than 1,500 units rolling.

"Numerous experimental tests have been made in cooperation with frozen foods shippers involving various refrigerants, as well as mechanical refrigeration.

"As we check arriving cars at our receiving docks, we find the old, old formula of 'natural ice with 30% salt' as the railroads' standby. Temperatures with this method approach 20° F.—plus not minus. The theoretical required temperature is zero, or less.

"A Florida truck body builder has developed a dry-ice combination which was applied to a recent rail-reefer-car test. The car was equipped with evaporating equipment (solution unrevealed) which worked in combination with approximately 5,000 pounds of dry-ice.

"The rail run was of three days duration from Florida to New York City and temperature on arrival was said to be approximately zero. Approximately 4,000 pounds of dry-ice was consumed. The extra cost involved may prove a value, if future tests provide uniform results. It is claimed that -10° F. can be obtained by the same method.

"Motor vehichle transportation depends principally upon dry-ice. Nevertheless, more over-the-road equipment is using mechanical refrigeration and displacing rail shipments. This applies to Mid-Western destinations with shipments originating in the East.

"Comparatively little West Coast product is moved by truck and that seldom is destined beyond Denver. An exception is poultry which provides good tonnage from points east of Denver to Chicago, as well as the Maryland-Delaware area supplying New York City.

"Cold storages enjoy profitable volume from frozen foods. These houses supply good service across the country but do place many secondary market areas at a disadvantage, in smaller cities where

(Continued on next page)

Triple Decker Stars In Fogel Booth

Sam Batt (left) and Leonard Redeyoff of the Fogel Refrigerator Co. with a "triple deck" dairy display case that was a feature of the Fogel exhibit at the Dairy Show in Atlantic City. At right is an open-type frozen food display case. Open-type frozen food display cases are a "must" in stores that go to the supermarket type of self-serve operation. Even in those that don't, self-serve fixtures have proven themselves as valuable aids to frozen foods merchandising as they have to the merchandising of dairy products.

Take A Tip From The "Spark-plug" of the Industry

Since 1935

Agricultural Experts report: Meat Shortage—which means high prices—will continue for several years. Beef is nearly 40% under demand. Pig crop uncertain. Sheep—lambs lowest per capita since 1876. Chickens off—Turkeys down 30%. So-o-o-o we recommend building—Locker plants and subplants NOW. We've stuck our necks out before for your benefit and we don't "cringe now" as we still think this is good advice. Service charges can be increased to make Locker operation profitable even with high building costs. People are price and shortage conscious. You save them money no matter what your charges are.

MASTER FOOD CONSERVATORS

will help you maintain service and keep your costs down. So don't just buy lockers—demand MASTER.

It Pays To Stick To MASTER

Your business is our business. Hitch your wagon to the "Spark-plug of the Industry" — order MASTER. Write for data on our units.

Endorsed by and sold through distributors of refrigeration and insulation.

MASTER MANUFACTURING CORP.
121 Main Street **Sioux City 4, Iowa**

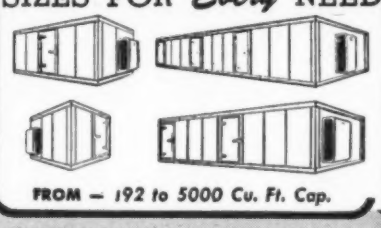
Member of Frozen Food Locker Institute, organized for your protection.

Over 1,000,000 Master Food Conservators in Use

RECO

Sectional FREEZE COOLERS and HARDENING ROOMS
Simple to Erect, Move or Enlarge.

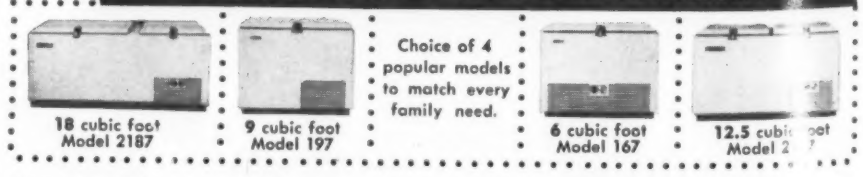
SIZES FOR *Every* NEED



FROM — 192 to 5000 Cu. Ft. Cap.

(REFRIGERATION ENGINEERING CORPORATION)
RECO PRODUCTS DIVISION
2020 Naudain Street, Phila. 46, Pa.

BEN-HUR Dealers Enjoy
A 4-TO-1 SALES ADVANTAGE
in FARM and HOME FREEZERS


18 cubic foot Model 2187
9 cubic foot Model 197
Choice of 4 popular models to match every family need.
6 cubic foot Model 167
12.5 cubic foot Model 2

You turn prospects into customers faster with the BEN-HUR Freezer franchise! You can offer *every* prospect COMPLETE-LINE-CHOICE... a BEN-HUR freezer that matches *exactly* the need of any family in your community—with 6, 9, 12.5, and 18 cubic foot cabinets that hold from 300 to 900 lbs. of frozen food.

Each of the FOUR popular BEN-HUR Models takes the lead in modern styling, convenience features, food freezing and storage efficiency—and operating economy... And in the home they promise customer enthusiasm through longer years of food savings and better meals.

Help EVERY Family
"Slash the High Cost of Eating"
with a BEN-HUR Freezer...
BEN-HUR MFG. CO.
Dept. AC634 East Keefe Avenue, Milwaukee 12, Wisconsin
BEN-HUR FARM and HOME FREEZERS

Tyler's Answer to 'Bottleneck'

Tyler Fixture Corp.'s exhibit at recent Dairy Industries Show revealed variety of fixtures designed to expedite merchandising of perishable foods. In right foreground is the new just-introduced frozen confections merchandising display case, featuring slanted sliding doors, claimed to give better protection against fogging and to provide some display advantages. Behind it is a frozen foods merchandiser with superstructure providing price slides as well as lighted displays. At left are a dairy display case, and full-length reach-in.

Careful Positioning and Stocking of Frozen Food Cases Can Up Retail Profits

(Concluded from preceding page)

freezer space is very limited and often non-existent.

"Multi-story buildings prevail and are obsolete from the standpoint of time and labor-saving use of equipment. Palletizing and lift trucks, in most buildings, do not operate above the first floor because of structural obstacles. Construction of new freezer space has been small and confined to holding rooms adjacent to packing plants.

"Public storage operators hesitate to risk investment in new, modern facilities. These men will probably await some of the coming expansion of frozen foods tonnage. When they do move, it will be to provide one-level buildings in which every advantage can be taken of mechanical handling.

"Distributors in many instances are hard put in obtaining working space in cold storages. It is essential that a frozen foods distributor have freezer space of his own, preferably leased, for current stock and break-up room and overnight holding of orders, for next day delivery. In addition office space adjacent to break-up rooms is necessary. Distributors prefer to lease such space rather than to build.

Brand Pricing Equalized

"Such is the current background. The business has definitely arrived. Pricing of established brands is comparatively equalized. Quality standards are being not only maintained but actually premium quality is to be found among name-brands.

"Packing, packaging, and distributing efficiency has so improved that only modest price increases were necessary, despite rising costs of raw material, labor, paper, fiber board, and transportation. A good job of controlling prices has been done.

"Reality appears to have dawned upon distributors as a whole. This has been prompted by some increases in the cost of product, plus the necessity for covering the cost of doing business. As a result, the competitive picture looks better from a pricing standpoint, hence a sounder business for distributors.

More Efficiency Needed

"Relief is not to be looked for from increased prices, therefore, more attention must be devoted to increasing efficiency. As this is accomplished, the business will become more profitable.

So, we come to the retailers. Those who realize that the price spread between fresh and frozen is narrower than ever, have really gone after frozen foods business. These merchants now have modern frozen foods departments in their stores and enjoy a fast turnover and good profits.

"On the other hand, the majority lack equipment or use obsolete cases. They appear satisfied to handle a line but do little to promote it. Nevertheless, store sales are now greater than during wartime and shortage periods.

"Smart merchants adhere to simple steps in their successful merchandising of frozen foods, which must be repeated for the benefit of those retailers who have potential sales volume available and who would like to do something about it. Let's take it in a list of Don'ts and Do's.

Good Rules To Follow

"Don't hide the frozen foods department, bring it out where it is visible.

"Do place it prominently—next to produce where it naturally belongs.

"Don't expect customers to guess frozen foods prices.

"Do mark all packages plainly. Piece-price poultry and fish.

"Don't let the department die by failing to tie-in with national and local advertising.

"Do keep cases clean and neat with properly stacked product, as well as using posters and other point-of-sale material.

"Don't neglect frozen foods because there is nobody responsible for their care and promotion.

"Do make one person the frozen foods manager, who should completely look after ordering, display, and selling.

"Don't allow cases to become cluttered with old, slow-moving packages. These take up valuable space and retard sales. Don't use the equipment for preserving fresh meat, fish, or poultry.

"Do sell frozen foods only from frozen foods cases. Keep a complete variety of fruits, vegetables, fish, poultry, and popular specialties.

"Don't stock cases in disorderly fashion. Carry more of each fast seller than slower items. However, don't overlook the importance of stock variety.

"Do give each item as much space as its sales rate deserves. Know what you sell and how much of each item.

"Many other ideas, not used by storekeepers but definitely promoted by merchants, will provide much greater sales per customer, attract new users, and result in high turnover and more substantial profits.

Freezer Users Important

"Don't neglect home zero refrigerator owners. They may be store customers already, who are not being catered to.

"Do learn which store customers own zero refrigerators. Offer them specials or even quantity discounts when they order in quantity.

"Don't overlook local appliance dealers, otherwise they may work with a competitor and take store customers elsewhere.

"Do know and make arrangements with home refrigerator dealers so that you can provide initial stock order, and then keep householders' cabinets filled.

"Don't leave frozen foods out of store advertisements.

"Do advertise well-known brands of frozen foods. Specials attract people to the store and sell many other frozen items as well.

"Don't invest in an unknown brand which will cost time and money to sell.

"Do carry and merchandise fully, one name-brand which is advertised nationally and locally for which there is known acceptance and demand.

"Don't handle two brands unless the store has enough equipment in which to stock both lines in complete variety.

"Do be sure that it is the customers who demand a second brand. If it is only the retailers idea, it will cost money and slow turnover.

One Brand to a Case

"Don't try to sell two brands out of a single case. One case barely accommodates one brand.

"Do an all-out job on one top flight brand before even considering an additional brand.

"Don't waste valuable space on assorted labels of unknown grade and age.

"Do use frozen foods at home—at least, enough so that you know their qualities of flavor, convenience, waste elimination, and value.

"Do sell an occasional extra-value in another label provided that its supplier guarantees its quality. Close-outs and occasional liquidations of quality surpluses are to be expected, but be careful.

"Don't think that every item under any label is selling regardless of what may appear to be a better profit margin.

"Do know how many dozens or packages of each item are sold weekly. Often an item with less profit margin outsells others and more money is made with faster turnover. Know rates of sale.

"Don't ignore the distributor's frozen foods salesman. If he represents a good firm, he should be welcome.

"Do listen to the supplier's salesman. He has to know frozen foods and how to merchandise them, to earn his living. If he knows his business, there are many suggestions he can make which will increase store sales and profits."

Announcement

Refrigeration Contractors are the logical ones to sell, install and service equipment required to refrigerate George-Ann Warm Room Lockers and Walk-in Boxes.

We invite them to cooperate with our agents (openings for which are still available) who are especially trained in locker financing and operation, meat cutting, processing and merchandising, as well as in grocery store and locker plant layouts.

All inquiries will be promptly handled.

WRITE:

GEORGE-ANN COMPANY 321 HIGHLAND DRIVE SEATTLE, WASHINGTON

BTC
Frozen Food Display Cabinet

- **Smart-Looking Design**
- **Full-View Mirror**
- **Cross-Flow Refrigeration**
- **Vapor-Sealed Insulation**
- **Economical Operation**

Model DC-12
Capacity 12½ cu. ft.
Size 28" x 76" x 61" over-all height
Motor 110-120 V.; Compressor, ⅓ hp.

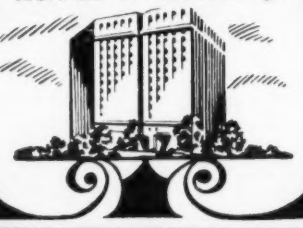
Frozen food merchandising needs a self-service display case that is correctly engineered for low-temperature refrigeration. BTC Frozen Food Display Cabinets will do the job efficiently and economically.

Built by a manufacturer of commercial refrigeration plates, established over 100 years, BTC Display Cabinets are available in three sizes—12½, 18, and 23 cu. ft. capacities —a size for every size store. Exceptionally well constructed, expertly designed, and outstanding in zero-refrigeration performance, BTC Display Cabinets give long-lasting service for merchandising best quality frozen foods.

Qualified distributors in open territories may still obtain a profitable BTC franchise—write today for full information.

THE BREWER-TITCHENER CORPORATION
BINGHAMTON, N. Y.

In the Heart OF DETROIT
FACING GRAND CIRCUS PARK
The Tuller, a modern hotel for those who want the best! Convenient to Offices, Theaters, and Shops. Friendly, courteous service and real Hotel Comfort. The Tuller Coffee Shop or Cafeteria for your Dining Pleasure at modest prices. It pays to stay at Hotel Tuller.
VISIT OUR COCKTAIL LOUNGE
ONE OF DETROIT'S FINEST
800 ROOMS $2.75 WITH BATH FROM
HOTEL TULLER
RICHARD C. HODGES, Mgr.



One of a series from

The KEY to AIR CONDITIONING

by James J. LaSalvia

If readers have any questions or problems concerning the application of air conditioning, they are invited to write to Mr. LaSalvia, who will be pleased to furnish a complete answer. There is no charge.

Heating (Cont.)

HEAT OF HUMIDIFICATION

When hot water is used in spraying for humidification, no extra heat is required by the water to vaporize into the air stream. The heat in the water came from some source, and in this case it came from a hot water heater.

When water at a temperature below the air stream temperature is sprayed for humidification, the heat required to vaporize the water must come from the air. This will cause the air stream to drop in temperature, and unless this drop in temperature of the air stream is taken care of, the air entering the room may be deficient in heat and may not bring the room temperature to where it should be.

In order to take care of this point, additional heat must be added to the air before coming in contact with the water, so that the loss may occur without disturbing the heat required for the room.

This additional heat is called "heat of humidification." It is arrived at by the same formula used in determining the temperature of the air entering the room.

Heat of humidification (temperature rise) = B.t.u. per hour of humidification ÷ 1.08 x c.f.m.

EXAMPLE NO. 3

Given: 3,086 c.f.m. as the total amount of air, being used to heat a room to 70° F.; the temperature of the air entering room is 130° F.; the amount of outside air being used for ventilation is 600 c.f.m.; the room is to maintain a 30% relative humidity when it is 0° F. outside; water directly from the city main is to be sprayed for humidification.

a. What is the temperature drop to the air stream?

b. What should the air temperature be leaving the heating coil to allow for the heat of humidification?

Outside conditions are 0° F. which is normally 100% relative humidity, which means the outside dewpoint temperature is 0° F.

Inside conditions are 70° F. and 30% relative humidity which is a dewpoint temperature of 37° F.

For 37° F. d.p. temp. there are 2.6 grains of moisture per cu. ft.

For 0° F. d.p. temp. there are .47 grains of moisture per cu. ft.

Heat of humidification = $600 \text{ c.f.m.} \times (2.6 - .47) \times 60 \times \frac{1{,}080}{7{,}000}$

Where: 60= minutes in one hour.
1,080 = B.t.u. in 1 lb. of water.
7,000 = grains in 1 lb. of water.
Heat of humidification = 600 x 2.13 x 9.25.

Heat of humidification = 11,821 B.t.u. per hour.

a. Temperature drop in air stream $= \frac{11{,}821 \text{ B.t.u./hour}}{1.08 \times 3{,}086 \text{ c.f.m.}}$

Temperature drop in air stream = 3.6° F.

b. The air temperature leaving the steam coil is 130° + 3.6° = 133.6° F.

DESIGN CONDITIONS

The following must be considered before any calculations for heating can proceed:

1. Outside design conditions.
a. Dry-bulb temperature.
b. Relative humidity.
2. Inside design conditions.
a. Dry-bulb temperature.
b. Relative humidity.

Outside design conditions used in computing the heat loss of a space are seldom taken at the lowest temperature ever recorded in a given region. These outside design conditions should be not more than 15° F. above the lowest temperature recorded during the preceding 10 years.

Table 1 shows the climatic conditions for United States and Canada.

(Continued on next page)

Table 1—Climatic Conditions for United States and Canada

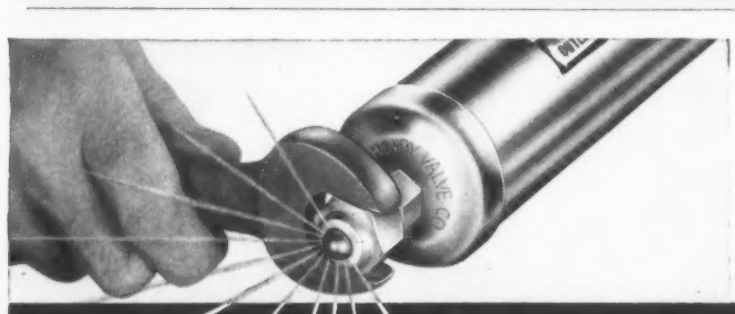
Col. A	Col. B	Col. C	Col. D	Col. E	Col. F
State	City	Elevation[b]	Average Temperature, Oct. 1-May 1	Lowest Temperature Ever Reported	Average Wind Velocity Dec., Jan., Feb., Miles per Hour
Alabama	Anniston	724	52.7	−10	
	Birmingham	694	52.9	−10	8.9
	Mobile	10	59.2	− 1	9.9
	Montgomery	201	56.7	− 5	7.3
Arizona	Flagstaff	6902	36.0	−30	
	Phoenix	1112	46.3	16	5.3
	Yuma	138	62.5	22	6.7
Arkansas	Bentonville	1295	46.9	−17	
	Fort Smith	449	50.8	−15	8.1
	Little Rock	257	51.8	−12	8.3
California	Eureka	43	49.3	20	7.3
	Fresno	277	54.3	17	5.4
	Independence	3944	47.8	− 5	
	Los Angeles	312	60.0	28	6.3
	Needles	480	60.8	18	
	Point Reyes	510	51.7	27	
	Red Bluff	303	53.1	17	6.0
	Sacramento	25	53.3	17	7.2
	San Diego	19	57.9	25	6.3
	San Francisco	52	54.6	27	7.5
	San Jose	95	53.3	18	
Colorado	Denver	5221	39.7	−29	7.6
	Durango	6552	35.4	−27	
	Grand Junction	4587	39.7	−21	4.4
	Leadville	10182	24.9	−31	
	Pueblo	4799	40.3	−27	8.0
Connecticut	Hartford	15	36.4	−24	8.9
	New Haven	13	38.6	−15	9.4
Dist. of Columbia	Washington	72	43.4	−15	7.9
Florida	Apalachicola	14	61.2	18	8.4
	Jacksonville	18	62.7	10	9.1
	Key West	6	73.1	43	10.6
	Miami	8	71.2	27	9.8
	Pensacola	13	60.0	7	11.2
	Tampa	24	66.0	19	8.5
Georgia	Atlanta	987	52.1	− 8	11.7
	Augusta	134	55.3	3	6.5
	Macon	330	55.0	7	6.6
	Savannah	38	56.9	8	9.6
	Thomasville	276	58.9	2	5.3
Idaho	Boise	2842	40.3	−13	9.1
	Lewiston	738	44.7	−23	4.1
	Pocatello	4468	36.5	−28	9.5
Illinois	Cairo	314	46.9	−16	9.9
	Chicago	594	37.3	−23	12.0
	Peoria	603	37.4	−27	8.1
	Springfield	602	40.5	−24	11.8
Indiana	Evansville	385	45.1	−16	9.7
	Fort Wayne	777	36.7	−24	10.3
	Indianapolis	718	40.4	−25	11.3
	Royal Center	736	37.8	−25	11.0
	Terre Haute	485	42.0	−18	10.2
Iowa	Charles City	1013	31.0	−34	7.9
	Davenport	579	36.4	−27	10.5
	Des Moines	800	36.0	−30	10.1
	Dubuque	641	34.2	−32	7.1
	Keokuk	574	38.9	−27	8.3
	Sioux City	1093	33.9	−35	11.6
Kansas	Concordia	1375	40.7	−25	7.7
	Dodge City	2522	42.3	−26	10.5

Col. A	Col. B	Col. C	Col. D	Col. E	Col. F
State	City	Elevation[b]	Average Temperature, Oct. 1-May 1	Lowest Temperature Ever Reported	Average Wind Velocity Dec., Jan., Feb., Miles per Hour
Kansas	Iola	963	44.8	−18	8.2
	Topeka	926	42.1	−25	9.6
	Wichita	1372	44.1	−22	12.2
Kentucky	Louisville	539	44.8	−20	9.9
	Lexington	975	43.7	−20	13.3
Louisiana	New Orleans	3	62.1	7	8.6
	Shreveport	174	56.3	− 5	8.8
Maine	Eastport	33	31.5	−23	12.5
	Greenville	1057	25.9	−36	
	Portland	61	34.0	−21	10.4
Maryland	Baltimore	14	44.2	− 7	8.1
Massachusetts	Boston	12	38.3	−18	12.4
	Fitchburg	402	35.3	−17	
	Nantucket	43	39.3	− 6	14.8
Michigan	Alpena	587	29.9	−28	11.0
	Detroit	619	35.8	−24	12.0
	Escanaba	594	27.8	−32	9.3
	Grand Rapids	638	35.2	−24	11.9
	Houghton	695	27.4	−31	9.1
	Lansing	858	34.0	−25	10.0
	Ludington	690	33.8	−21	
	Marquette	674	31.2	−27	10.7
	Sault Ste. Marie	607	26.7	−37	8.9
Minnesota	Duluth	1128	24.3	−41	13.4
	Minneapolis	830	29.8	−34	11.3
	Moorhead	895	22.8	−48	9.9
	St. Paul	703	29.0	−34	9.5
Mississippi	Corinth	470	51.0	− 8	
	Meridian	343	54.8	− 6	5.7
	Vicksburg	234	56.8	− 1	8.3
Missouri	Columbia	733	42.3	−26	8.9
	Hannibal	759	40.1	−25	9.6
	Kansas City	741	42.8	−22	10.2
	St. Louis	465	44.3	−22	11.7
	Springfield	1265	44.8	−29	10.9
Montana	Billings	3568	33.4	−38	12.4
	Havre	2488	27.6	−57	9.4
	Helena	3893	29.1	−42	7.3
	Kalispell	2956	31.6	−34	5.2
	Miles City	2351	27.6	−49	5.6
Nebraska	Drexel	1299	35.7	−25	
	Lincoln	1184	37.8	−29	10.6
	North Platte	2783	36.8	−35	8.3
	Omaha	978	35.8	−32	9.6
	Valentine	2581	33.5	−38	9.3
Nevada	Reno	4397	39.0	−19	6.0
	Tonopah	6087	39.7	−15	
	Winnemucca	4288	37.9	−36	8.1
New Hampshire	Concord	339	31.0	−37	6.0
New Jersey	Atlantic City	8	41.6	− 9	15.9
	Cape May	17	43.2	− 3	
	Newark	11	40.3	−14	
	Sandy Hook	15	41.2	−11	16.1
	Trenton	56	40.6	−14	11.0
New Mexico	Albuquerque	5314	44.1	−16	7.3
	Roswell	3568	48.9	−29	7.1
	Santa Fe	6312	38.6	−13	7.1
New York	Albany	119	35.4	−24	10.4
	Binghamton	858	35.1	−28	6.8

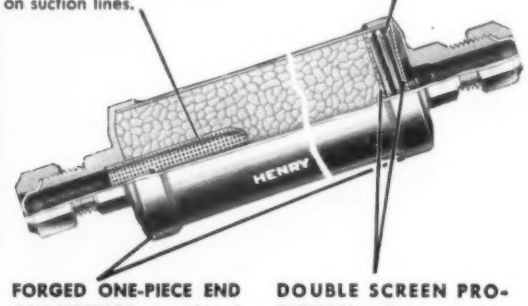
Heating Ventilating Air Conditioning Guide 1947

"For the HOTTEST DEAL in Town"
Dealers Say It Everywhere
The Modern • Efficient • Economical
"NAT" SUSPENDED GAS UNIT HEATERS
3 sizes to suit all requirements 75,000-110,000 and 165,000 BTU Capacity.
Available for Natural, Butane, Propane, or Manufactured Gases.
Delivery within 3 days upon receipt of order. Some exclusive territories still available.
Models 75 and 110 approved by the American Gas Association.
ESTABLISHED SINCE 1929

UNION MADE
Manufacturers of combination heating and cooling units, and the NAT "Self-Contained Air Conditioning unit.
WRITE, WIRE OR PHONE FOR FULL INFORMATION
THE NAT CORPORATION
2710 McGee Trafficway Kansas City 8, Mo.



ON HENRY DRIERS THIS HISS MEANS OK!
The Hiss a Henry Drier emits when its seal cap is loosened is the escaping rush of dehydrated air sealed inside. This hiss assures you your Henry Drier does not leak and is in factory-dry condition. It means you are installing a 100% efficient, leak-proof drier on your job. It guarantees removal of all moisture from the refrigerant with practically no pressure drop. It means you can be completely confident in the drier you install.
ONLY HENRY DRIERS GIVE YOU ALL THESE FEATURES
PATENTED DISPERSION TUBE... prevents channeling, insures maximum utilization of Silica Gel to remove moisture and impurities. Low pressure drop permits the use of driers on suction lines.
SPRING COMPRESSED DEHYDRANT... exclusive Henry feature, keeps Silica Gel tightly packed, eliminates powdering or clogging of screens.



FORGED ONE-PIECE END CAP-FITTINGS... machined from one forging. Withstands all installation strains. Leak proof.
DOUBLE SCREEN PROTECTION... filters out particles as small as .003" diameter. Stands any system pressure.
Sold by leading wholesalers
HENRY VALVE CO. CONTROLLING FLOW SINCE 1914
Control Devices, Valves, Driers, Strainers and Accessories for Refrigeration and Air Conditioning and Industrial Applications.
HENRY VALVE CO.
3260 W. Grand Ave., Chicago 51, Ill. • Cable: HEVALCO Chicago

Figuring Design--

(Continued from preceding page)

Fig. 1 shows the design temperature zone map, which will guide towards selecting the outside design for regions in United States and Canada.

The inside air temperature which must be maintained in a space is understood to be at the breathing line, 5 ft. above the floor.

For inside conditions refer to the section on effective temperature. The proper dry-bulb temperature to be maintained depends upon the relative humidity and air motion in the space.

Effective temperatures of between 63° and 71° F. are taken as the limits for winter heating. For average conditions 66° F. effective temperature may be taken.

The following conditions all have a 66° F. E. T.:

INSIDE CONDITIONS

	Condition		
	No. 1	**No. 2**	**No. 3**
Dry-bulb temp.	70° F.	71° F.	72° F.
Relative hum.	50%	40%	30%
Effective temp.	66° F.	66° F.	66° F.

Any one of the above conditions is proper with an air motion in the space of 15 to 25 f.p.m. The air motion for heating should not be greater than 25 f.p.m.

If the air motion in the space is greater than 25 f.p.m., it is necessary to increase the dry-bulb temperature of the space, which will give a higher effective temperature for comfort, to compensate for greater air motion.

HEAT LOSS

The heating load is known as the "heat loss." When heating a space, the heat flows from inside the heated space to the outdoors. The space loses heat.

The heat transmission coefficients are the same whether calculating the "heat gain" for the cooling load or "heat loss" for the heating load.

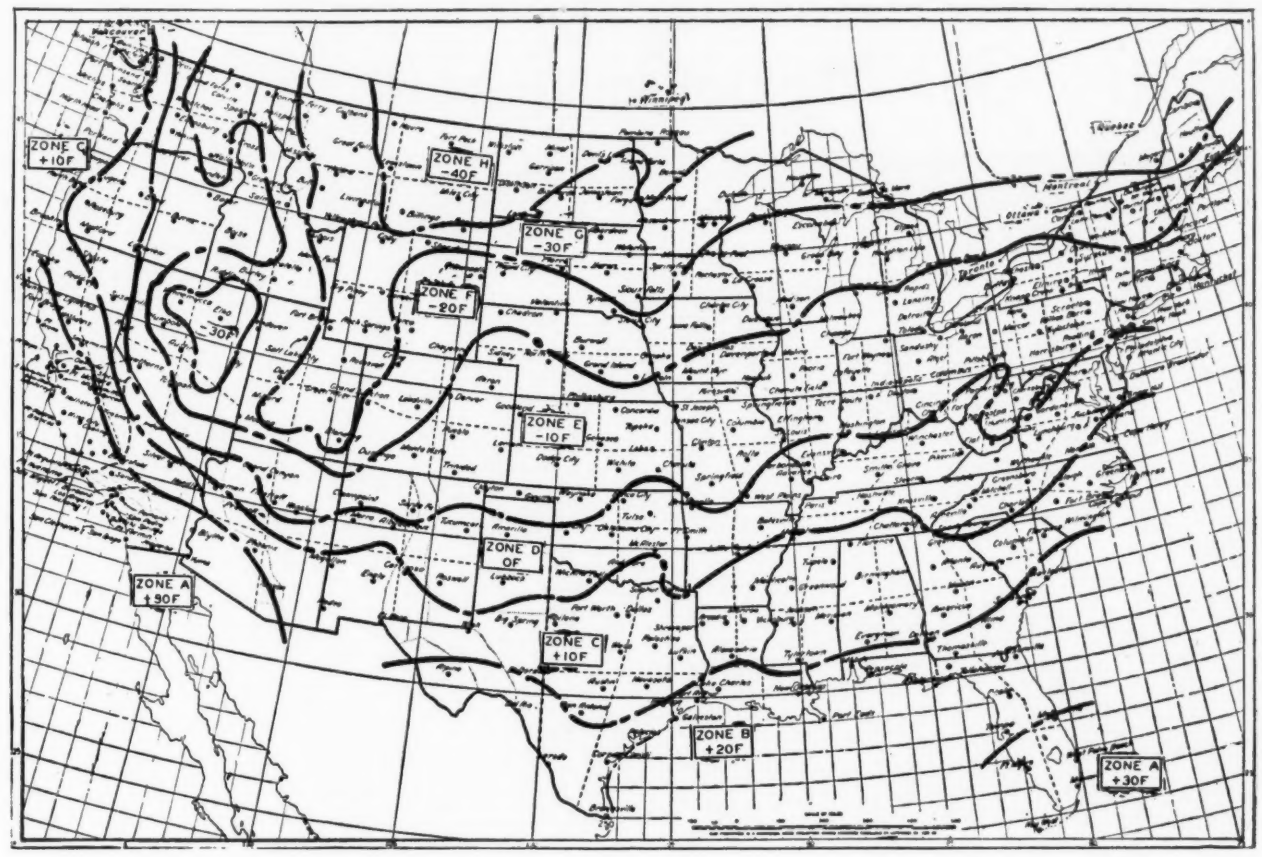
The "heat loss" occurs in two ways:

1. By infiltration.
2. By direct transmission through the structure of the space.

The total "heat loss" is the sum of the two.

(To Be Continued)

Fig. 1—Design Temperature Zone Map



Heating Ventilating Air Conditioning Guide 1947

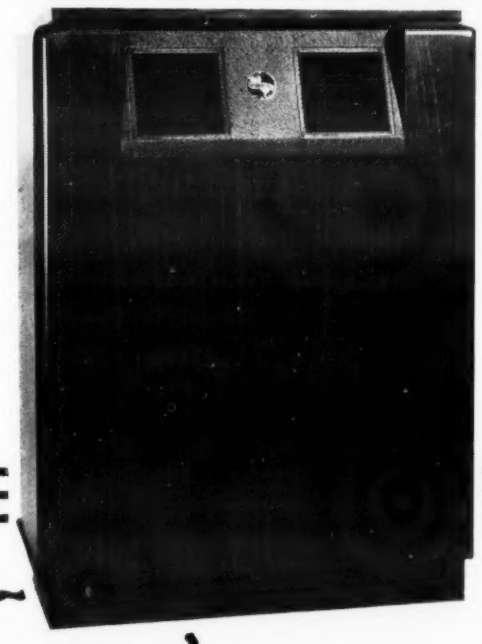
Table 1—Climatic Conditions (Cont.)

Col. A	Col. B	Col. C	Col. D	Col. E	Col. F
State	City	Elevation[b]	Average Temperature, Oct. 1-May 1	Lowest Temperature Ever Reported	Average Wind Velocity Dec., Jan., Feb., Miles per Hour
New York	Buffalo	693	35.0	−20	17.1
	Canton	406	29.5	−43	10.6
	Ithaca	872	35.1	−22	11.3
	New York	10	41.0	−14	16.8
	Oswego	292	34.2	−23	12.3
	Rochester	543	35.1	−22	10.1
	Syracuse	399	35.0	−26	11.3
North Carolina	Asheville	2203	45.9	− 6	9.5
	Charlotte	753	50.5	− 5	7.3
	Hatteras	7	53.4	8	14.6
	Manteo	12	51.6	7	
	Raleigh	400	50.1	− 2	7.8
	Wilmington	6	54.3	5	8.1
North Dakota	Bismarck	1650	25.3	−45	9.1
	Devils Lake	1472	21.8	−46	10.1
	Grand Forks	832	22.2	−43	
	Williston	1877	23.4	−50	8.4
Ohio	Cincinnati	761	42.3	−17	8.5
	Cleveland	787	37.6	−17	15.0
	Columbus	724	40.2	−20	11.6
	Dayton	743	40.3	−28	10.9
	Sandusky	603	38.0	−16	11.0
	Toledo	589	37.2	−16	12.1
Oklahoma	Broken Arrow	765	47.9	−12	
	Oklahoma City	1280	48.7	−17	11.5
Oregon	Baker	3445	35.9	−25	5.9
	Medford	1314	45.1	−10	4.3
	Portland	30	47.2	− 2	7.3
	Roseburg	479	47.1	− 6	3.9
Pennsylvania	Erie	654	37.0	−16	13.6
	Harrisburg	335	40.6	−14	7.9
	Philadelphia	26	43.5	−11	11.0
	Pittsburgh	1248	40.7	−20	11.7
	Reading	266	40.9	−14	9.1
	Scranton	746	37.5	−19	7.6
Rhode Island	Block Island	35	40.0	−10	18.0
	Narragansett Pier	22	38.1	−13	
	Providence	12	38.7	−17	12.1
South Carolina	Charleston	9	54.6	7	10.5
	Columbia	332	54.2	− 2	8.1
	Due West	711	51.6	6	8.6
	Greenville	1006	49.1	− 5	8.4
South Dakota	Huron	1282	29.2	−43	10.6
	Pierre	1719	32.4	−40	8.3
	Rapid City	3215	34.0	−34	7.8
Tennessee	Chattanooga	689	50.2	−10	7.6
	Knoxville	949	48.1	−16	7.2
	Memphis	269	51.2	− 9	9.3
	Nashville	585	48.9	−13	9.8
Texas	Abilene	1752	54.2	− 6	10.1
	Amarillo	3590	43.3	−16	12.1
	Austin	615	57.0	− 1	8.0
	Brownsville	16	66.8	12	10.2
	Corpus Christi	10	61.9	11	11.0
	Dallas	487	55.4	− 3	10.6
	Del Rio	957	60.7	12	7.9
	El Paso	3710	53.8	− 5	8.9
	Ft. Worth	688	55.6	− 8	10.4
	Galveston	7	62.0	8	11.2
Texas	Houston	41	61.6	5	10.5
	Palestine	492	57.0	− 6	8.0
	Port Arthur	5	61.1	11	10.5
	San Antonio	782	60.9	4	8.3
	Taylor	583	58.2	0	9.2
Utah	Modena	5460	36.7	−32	9.3
	Salt Lake City	4222	38.6	−30	7.9
Vermont	Burlington	398	31.2	−29	11.7
	Northfield	842	28.1	−41	
Virginia	Cape Henry	16	49.0	5	13.1
	Lynchburg	631	46.4	− 7	8.1
	Norfolk	11	49.6	2	10.1
	Richmond	162	47.4	− 3	8.1
	Wytheville	2299	42.0	− 8	
Washington	North Head	194	43.3	11	16.3
	Seattle	14	45.9	3	9.7
	Spokane	1955	37.9	−30	6.2
	Tacoma	109	44.9	7	7.9
	Tatoosh Island	101	44.4	7	19.9
	Walla Walla	949	43.4	−29	5.5
	Yakima	1068	40.6	−24	4.1
West Virginia	Elkins	1969	38.2	−28	6.1
	Parkersburg	615	42.8	−27	7.1
Wisconsin	Green Bay	593	30.4	−36	10.6
	La Crosse	664	31.5	−43	8.9
	Madison	938	31.8	−29	10.1
	Milwaukee	674	33.6	−25	12.1
	Wausau	1221	26.1	−40	
Wyoming	Cheyenne	6139	33.9	−38	13.3
	Lander	5352	30.1	−40	3.9
	Yellowstone Park	6239	29.4	−40	8.8
Alta.	Edmonton	2219	22.8	−57	7.5
B. C.	Vancouver	22	42.6	2	4.5
	Victoria	228	44.0	− 2	12.6
Man.	Winnipeg	786	17.2	−54	10.1
N. B.	Fredericton	164	27.5	−35	9.1
N. S.	Yarmouth	136	34.8	−12	14.3
Ont.	London	912	32.6	−27	10.3
	Ottawa	294	26.4	−35	8.4
	Port Arthur	644	22.0	−40	8.0
	Toronto	379	32.6	−26	13.6
P. E. I.	Charlottetown	186	29.4	−27	9.8
Que.	Montreal	187	28.1	−29	11.3
	Quebec	296	24.5	−34	13.3
Sask.	Prince Albert	1414	16.0	−70	5.1
Yukon	Dawson	1062	1.9	−68	3.7
Newfoundland	St. Johns	428	31.4	−21	12

[a]United States data from U. S. Weather Bureau, and Canadian data from Meteorological Service of Canada, corrected to 1943.
[b]Elevation of ground at station above sea level, feet. Elevations obtained—1946.
[c]Blank spaces indicate data not available.

Heating Ventilating Air Conditioning Guide 1947

F. H. A. APPROVED !



DISTRIBUTORSHIPS AVAILABLE

Some Franchise territories still available — quantity discounts. Contract must be signed before Feb. 1st to insure spring Delivery.

SALES! . . .

Look at these Specifications!

* **COMPACT.** 27" high, 22" wide, 10" deep.
* **CAPACITY.** 2 Rotary Blowers, 12,000 BTU per hour.
* **REFRIGERATED.** With Freon.
* **FILTERS AND DEHUMIDIFIES.** Fiberglass filters.
* **ENGINEERED.** To cool 2,500 cu. ft. room under normal conditions.
* **SMART.** Walnut, blond mahogany or white finishes. Special finishes on quantity orders.
* **MODERN CONTROLS.** Equipped with Expansion Valve, Solenoid and Thermostat for TRIPLE control.
* **MOVABILITY.** Compressor-to-unit copper tubing is easy to move. Apartments or hotels can offer CHOICE of air conditioning. Lessees can install and later move unit without losing equity.

Refrigerated AIR CONDITIONING installed WITHOUT "Wrecking the Place!"

INTERNATIONAL—the most modern air conditioning system on the market—has a lower initial cost and installs for 25% to 40% less! No expensive alterations of walls, ceilings or masonry . . . operates anywhere in the room. These are BIG selling points! As efficient as it is attractive (finished in walnut grain, blond mahogany or white porcelain), INTERNATIONAL cools and dehumidifies from any location in a home, office, hospital, tourist court, hotel. The compressor (extra) can be placed in attic, basement or closet, connects to the unit by an easily installed, inexpensive copper tube. Movable, fully automatic, triple thermostatic control. Increased compressor capacity makes large commercial sales easy. All the advantages of a single unit system **without** blocking windows, winter removal or compressor noise and heat. All the advantages of a central system **without** the disadvantages of "wrecking the place" . . . no duct work or tearing out of partitions. Order your stock NOW.

Cable Address "Intime"

INTERNATIONAL Air CONDITIONING

"America's First Flexible Units!"

Manufactured by
INTERNATIONAL MFG. CO.
515 West Main St., Oklahoma City, Okla.

Manufacturers of all copper REFRIGERATOR COILS from 1 to 20 tons.
Easily installed in existing duct work to connect with remote condensing units.

Wholesaler Uses Two Rooms, Semi-Self-Serve Plan To Get Maximum Benefit from Display

Section of Aetna Supply Co.'s showroom which houses counter and small parts displays.

* * *

NEW YORK CITY—Use of a number of innovations in display arrangement to get the maximum display out of the available space marks the present arrangement of the quarters of Aetna Supply Co., refrigeration parts and supplies wholesaler in the Bronx here.

Aetna's showroom really consists of two rooms, separated by an archway. The door from the street leads into the room which houses the counter, displays of smaller parts and supplies, and shelving which carries the stock of the smaller supplies.

Archway to the second display room is to the right of the doorway as the custmer enters, and in this room is housed the display of the larger and unitary equipment, such as condensing units, blower-type evaporators, large coil assemblies, water coolers, and air conditioners.

"When a customer is buying this larger type of equipment, he probably will want to talk about it a bit," says Irving Fajans, head of the supply wholesaling firm, "and this room provides a place where we can look over the models and talk without being disturbed by the activity in the counter room."

Above is the second room where larger equipment is displayed.

The counter room is semi-self-service, and Fajans has utilized several novel ideas to put all items that lend themselves to self-service on display (see illustration).

On the floor are "roto-bin" display and stock shelves, circular compartmented, rotating shelves in which are displayed, as Fajans puts it, "the items that the customer might not ordinarily be thinking about, but which will suggest a need when he sees them."

Along the front windows are terraced rows of wooden bins, in which are displayed demand items like line valves and driers, which the customer can readily pick up and bring over to the counter.

Price cards are attached to every section of the roto-bins and terraced wooden bins, so that the customer never has to ask the price.

Terraced wood bins of the same style as those along the front windows occupy one end of the counter. Underside of the counters have drawers in which are kept small items which are in big demand, thus eliminating the need for the counterman to go back into the stock shelving.

The ends of the stock shelving that face out into the store from behind the counters are finished off in wood paneling and serve a double function in the store's merchandising plans. As shown in the illustration, part of this wood paneled section is given over to drawers which hold small parts.

The upper part, however, is devoted to "shadow box" displays which spotlight new or special products.

On the wall which separates the counter room from the "big equipment" display room is a board display of replacement hardware.

Aetna Supply doesn't follow the usual procedure of hanging V-belts from wooden pegs or hooks high on the walls of its establishments.

It stocks them in shelving, but the shelving is especially designed, being made of plywood, with demountable partitions that permit variations in the various bin sizes.

Copper tubing is stacked in a simply constructed angle iron rack, which serves to keep the tubing off of the floor and out of the way.

"When rolls of tubing are permitted to lay around, they're almost sure to get nicked or poked with some sharp object, and a lot of tubing stock can be damaged in such a manner," Fajans said.

One other fixture in the Aetna wholesaling headquarters that is distinetive is a Coca-Cola beverage cooler cabinet located right at the door, this providing a boon to tired, rushed service engineers coming in for supplies during the summer months. A box containing cigarettes is also available on the main counter.

A close-up view of Aetna's roto-bins and terraced displays.

Designed and Engineered for Maximum Performance

STRAINERS
CHECK VALVES
SIGHT GLASSES
QUICK COUPLERS
RECEIVER VALVES
REFILLABLE DRIERS
ANGLE GLOBE VALVES
PACKED GLOBE VALVES
CHARGING HOSE VALVES
PACKLESS ANGLE VALVES
PRESSURE RELIEF VALVES
UNI-HOLE COMPRESSOR VALVES
ECONOMIZERS (HEAT EXCHANGERS)
CYLINDER & SERVICE DRUM VALVES

FILTERS
MANIFOLDS
CHARGING HOSE
RAPID CHARGERS
GAUGE MANIFOLDS
PACKED LINE VALVES
SAE FLARE FITTINGS
PACKED ANGLE VALVES
PACKLESS LINE VALVES
HAND EXPANSION VALVES
NON-REFILLABLE DRIERS
DOUBLE PORT SIGHT GLASSES
HY-K ECONOMIZER ACCUMULATORS
PACKLESS BRANCH SHUT-OFF VALVES

157

If you haven't a copy of our new SUPERIOR Catalog R-3, request one today.

Superior Valve and Fittings Co.

1509 WEST LIBERTY AVE., PITTSBURGH 26, PENNA.

Fine PRODUCTS DESIGN-ENGINEERED FOR RUGGED SERVICE

You'll find *every practical* feature in

RAPID Refillable DEHYDRATORS

. . . Really dehydrate because balanced dimensions provide maximum dispersion area, thorough contact with silica gel. Sturdy one-piece, leakproof shell, triple sealed, truly non-collapsible. Removable, large area, finger type screens permit complete cleaning, prevent damage. Bronze reinforcing spring in outlet screen.

YOUR WHOLESALER has Rapid Dehydrators in eight practical sizes: 5, 10, 20, 30, 40, 50, 125, 200 cu. in. Type number stamped on each for easy recognition

Fine PRODUCTS CO.

185 NORTH WABASH • CHICAGO 1, ILLINOIS

What's New

General Electric 'Airliner' range

* * *

'Leader,' 'Airliner' Ranges Complete G-E 1949 Line

BRIDGEPORT, Conn. — Two new low-priced electric ranges have been announced by General Electric Co.

According to J. R. Poteat, manager of the G-E range and water heater divisions, the introductions complete the company's 1949 line, which includes a model in every price bracket.

Known as the Leader and Airliner, the new ranges carry recommended national retail prices of $199.95 and $239.95, respectively. The latter represents a $35 price reduction from the 1948 Airliner.

Both ranges are scheduled to appear in retail stores soon. The company's two deluxe push-button models and a lower-priced deluxe model have been in production since September.

Both the Leader and Airliner have been redesigned. They have new cabinet-type, 39-in. wide bodies.

The Airliner has a new control panel and improved styling. Switches are of white plastic trimmed in bright chrome. A higher lamp housing sheds light where it is needed on the range surface. An electric minute-timer clock is included for timing cooking operations.

Control panel of the Leader has also been restyled.

Both ranges have three five-heat Calrod surface units and a five-heat deep-well unit with built-in high-speed, six-quart, aluminum thrift cooker. Each has a master oven with a high-wattage broiler unit for charcoal-type broiling. The Airliner is equipped with a Calrod bake unit, while the Leader has an open-coil unit.

Other features common to the two ranges are a removable "No-Stain" oven vent, built-in time and temperature charts, and oven indicator lights.

The Airliner has three storage drawers providing more than 3½ cu. ft. of storage space, while the Leader has a single large storage drawer.

* * *

Coin Vendor Can Handle 65 Bottles Per Loading

CHICAGO—A new automatic coin operated beverage cooler and dispenser that will vend 65 bottles in one loading and which provides storage space for the pre-cooling of 17 additional bottles has been announced by Mills Industries, Inc.

The new refrigerated vendor measures only 21⅝ in. wide by 21 in. deep. It is equipped with Mills automatic coin changer which permits the use of nickles, dimes, or quarters. Correct change is returned if a dime or quarter is inserted.

The additional pre-cooling storage space provided on this model, eliminates the possibility of vending warm bottles after refilling.

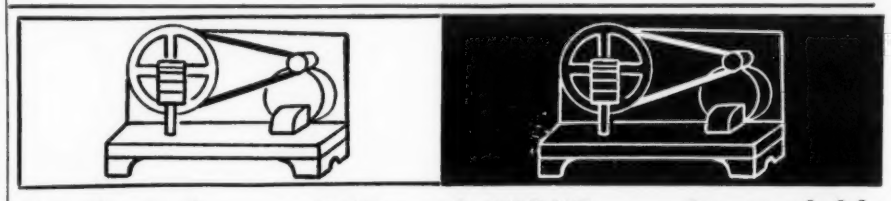
THERE'S A MILLS FOR EVERY INSTALLATION

choose them for yours!

MILLS

condensing units

Mills Industries, Incorporated • 4100 Fullerton Avenue • Chicago 39, Illinois



On the Job . . . DAY and NIGHT . . . Dependable

MANHATTAN WHIPCORD FHP V-BELTS

For Refrigeration and Air Conditioning Equipment, stock and replace with Manhattan Whipcord FHP V-Belts; Condor V-Belts on heavy duty multiple drives. Cool Running — Quiet — Non-Slip — Minimum Stretch — Longer Lasting

RAYBESTOS-MANHATTAN INC.

Distributors Everywhere

MANHATTAN RUBBER DIVISION PASSAIC, NEW JERSEY

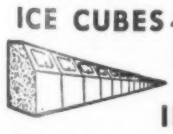
DEALERS: Here is an immediate delivery ice cube maker that will almost sell itself on the economy angle alone. Advertisement below is one of a series your prospects will be reading in national publications. We furnish complete literature to help you sell. Ask about territories now open.

SAVE UP TO 90% on ICE CUBE COSTS

Northwest ICE CUBE MAKER

Saves Money—average cost per bushel (400 cubes) is 7c. What do you pay?
Freezes Faster—2 to 5 freezes per day varies with humidity and temperature conditions.
Cuts Shrinkage—special cabinet design maintains sub-zero cold in storage compartment even when door is open.
Freezes Colder—sub-zero cubes mean colder beverages, more economy because cubes last longer in drinks.

ICE CUBES Unlimited with TANDEM INSTALLATIONS



No limit to ice cube production with Northwest. We plan a multiple installation to occupy minimum floor space.

FOR INSTITUTIONS requiring uninterrupted twenty-four hour service.

FOR BARS AND CLUBS fits under any standard bar —economical, time-saving.

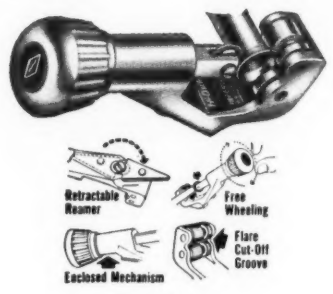
FOR RESTAURANTS no cold loss despite frequent opening of cabinet.

FOR HOTELS supplies continual demand for room service and dining rooms

1949 MODELS
Immediate Delivery
JUNIOR SERIES*— 210 cubes each freeze 1½ bu. storage (600 cubes)
SENIOR SERIES*— 336 cubes each freeze 3 bu. storage (1,200 cubes)
JUMBO SERIES— Junior with 3 bu. storage Senior with 5 bu. storage
*Self contained or remote compressors

SEE YOUR NEAREST DEALER, OR WRITE

Northwest EQUIPMENT COMPANY
3021 5th Avenue So. Minneapolis 8, Minn.



* * *

Tube Cutter Makes Speedy Adjustments for Size

CHICAGO — Imperial Brass Mfg. Co. here has announced a new tube cutter featuring "free wheeling" ball bearing action. It will cut a variety of materials in all sizes from ⅛ to 1-in. o.d., according to the company.

Ball thrust bearings are built into the tool to provide ease of operation and to make possible speedy size adjustment.

Tubing being cut moves on rollers, adding to the ease of operation. Removal of a cracked flare without waste of tubing is made possible by a patented flare cut-off groove in the rollers.

The new cutter, which is identified as No. 274-F, has a retractable locking reamer for reaming tubing after it is cut.

It is designed for use with copper, brass, aluminum, Bundy steel, block tin and lead tubing, hard or soft temper.

Feed mechanism of the tool is enclosed to protect threads. The weight of the tool is only 6 oz. as the body is made of aluminum alloy. Price is given as $3.

New Loudon Model Has Commercial, Domestic Use

MINNEAPOLIS—A new combination refrigerator and freezer for either commercial or domestic use has been announced by Loudon Sales Co. here.

The new 1949 model, called No. 21-STT, is a self-contained unit offering 9 cu. ft. of low-temperature storage and 11 cu. ft. of normal temperature refrigeration.

Two separate sealed units with separate controls are employed, according to the company. Solid brass chrome-plated hardware and steel cabinet with white Dulux finish are other features. The freezer section of the unit is equipped with four inner doors. Separate vertical doors open into the normal temperature and low temperature sections.

Artkraft

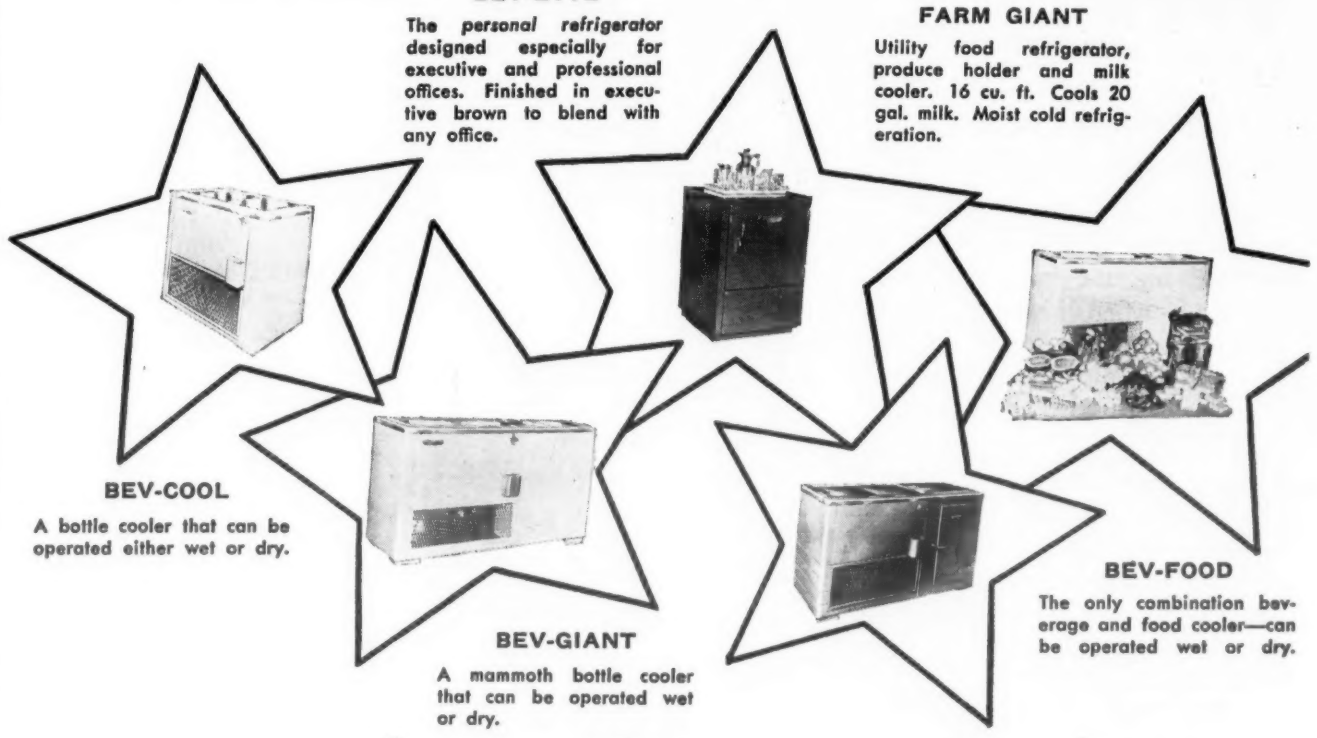
HITCH YOUR FUTURE TO THESE STARS!

INVESTIGATE OUR STARTLING NEW

KEY DEALER PLAN ON THE

Artkraft* BEV-LINE

OF SPECIALTY REFRIGERATION PRODUCTS



BEV-ETTE
The *personal refrigerator* designed especially for executive and professional offices. Finished in executive brown to blend with any office.

FARM GIANT
Utility food refrigerator, produce holder and milk cooler. 16 cu. ft. Cools 20 gal. milk. Moist cold refrigeration.

BEV-COOL
A bottle cooler that can be operated either wet or dry.

BEV-GIANT
A mammoth bottle cooler that can be operated wet or dry.

BEV-FOOD
The only combination beverage and food cooler—can be operated wet or dry.

★ ★ ★ ★ ★ Artkraft* is producing this fine line of SPECIALTY REFRIGERATION at "MOST CUBIC FEET PER DOLLAR" low prices, backed by an aggressive national advertising campaign in over 20 magazines, to net you BIG PROFITS!

Go to the TOP with this AaA1 rated, 27 year old organization—in the SPECIALTY REFRIGERATION FIELD!

Send coupon today for full details on our KEY DEALER PLAN

REGIONAL MEN — ATTENTION!

Good regional men write today for details on remaining open territory.

Artkraft* MANUFACTURING CORPORATION
200 Kibby Street Lima, Ohio, U. S. A.

THIS COUPON FOR YOUR CONVENIENCE

Artkraft* MANUFACTURING CORPORATION
200 KIBBY STREET LIMA, OHIO, U.S.A.
☐ Please send full details on Artkraft* Key Dealer Plan
NAME .....
FIRM .....
STREET .....
CITY .....

SIGNS OF LONG LIFE

QUALITY PRODUCTS FOR OVER A QUARTER CENTURY

*Trademark Reg. U.S. Pat. Off.

Does Your Cooling Tower Perform the Way It's Supposed To? Here's a Way To Check

In last week's NEWS was presented an account of an important meeting for maintenance engineers from textile mills conducted in Winston-Salem, N. C. by the Bahnson Co. The meeting took the form of two classes, each running a week, where these maintenance men received instruction from Bahnson engineers and representatives of manufacturers on how to maintain air conditioning equipment.

One of the talks was presented by Ray Baker of the C. H. Wheeler Co., manufacturer of cooling towers. The first instalment of this talk is published herewith, and it will be concluded in the following issue of the NEWS.

By Ray Baker, C. H. Wheeler Co.

PURPOSE OF COOLING TOWERS

One of the major problems facing industries today is the transfer of various materials used in numerous industrial processes. The transportation of materials has always been of vital importance and the relocation of quantities of heat is of no less importance. In the textile industries, this is obviously true when the manufacturers are air conditioning their mills in order to improve conditions for both materials and personnel thus increasing production, reducing waste, and decreasing labor turnover.

In the textile mill, the problem is one primarily of humidity control in order to maintain proper tension on the threads being woven or knitted into the finished products. Along with this humidity control problem goes hand in hand the problem of heat removal, and the air conditioning system is primarily a heat pump. It pumps heat from the air within the building to the air outside the building and part of the heat cycle is through a cooling water system.

Many of the textile mills are situated far from sufficient supplies of water and the water cooling tower, or spray pond, is used to enable the circulating water to be cooled and returned to the air conditioning system with a minimum of water loss.

As you may know, the water shortage throughout the country is becoming more acute and this is especially true in our Southwest. The available water quantities are decreasing year by year and there will be more and more cooling towers installed. Mills and power plants which require water for cooling, whether for air conditioning, processing, or electric generation, draw on wells or streams whenever possible.

But this water when once heated in the plant ordinarily must be discarded and fresh water used. The cooling tower enables such water to be used over and over, and thereby has placed or kept in operation many plants which otherwise either would have been built, or would have been forced to suspend operations.

THEORY OF OPERATION

In all cases of cooling tower operation, the hot water enters the tower at the top through the inlet piping into what is known as the water distribution system. The distribution is of various types depending on the design of the tower.

The gravity feed system in which the water falls from open flumes and troughs, and splashes over the wood fill until it reaches the bottom, is the most common system used. It has the advantages of reducing the pumping costs, using materials of relatively low cost, and being easy to clean.

Another water distribution system is a spray header, made of cast iron or galvanized steel pipe and with brass or bronze spray nozzles. The system operates at a higher pressure requiring usually about 6 or 7 lbs. gauge pressure.

Either distribution system serves to break up the water into small drops giving as much surface area to the water as possible. As the water passes down through the tower, it comes in contact with the air stream which is passing through the tower. The air is either pushed by the forced draft fans at the bottom or pulled by the induced draft fans at the top or, in the natural draft tower, moves through as a result of the wind blowing.

The air passing over the surface of the water evaporates some of the moisture and, in so doing, reduces the temperature of the water. For the evaporation to take place, the water evaporated must receive heat and this heat comes primarily from the balance of the water which is left unevaporated.

This indicates why proper distribution of the water is so important to satisfactory cooling tower operation. It also indicates why it is necessary to obtain the proper flow of air and to insure that the air and water will be thoroughly mixed. The cooling tower is a heat removal apparatus. It is the job of the operating and maintenance engineer to see that the tower removes the heat in the best possible manner.

CHECKING PERFORMANCE

The operating engineer frequently wants to know whether the cooling tower which he has installed in his plant is doing the job for which it was designed. He has, at his disposal, the operating instructions of the manufacturer, the design conditions, and the outline and foundation arrangement drawings.

Let us assume that a particular operating engineer is concerned with a cooling tower which is part of an air conditioning system for a textile mill. The system is supposed to have a capacity of 300 tons of refrigeration. The tower would probably then be designed to cool 900 g.p.m. of water from 95° to 85° at a wet-bulb temperature of 78° F.

When we consider the design conditions we see that in order to judge whether the cooling tower is performing as it should, we need to know the quantity of water which is circulating, the temperatures at which it enters and leaves the cooling tower, and also the wet-bulb temperature of the air entering the tower.

The question is, first of all, whether the operating engineer can obtain these temperatures and water quantity. The only method which he has to obtain the water quantity with a reasonable degree of accuracy is to determine what total head and circulating water pump is developing and then he has to refer to the pump performance curves which have been furnished by the pump manufacturer.

If these performance curves are the result of actual test data then he is fortunate and will be able to determine the quantity of circulating water within approximately 5%. If, however, they are estimated curves, the water quantity which he is able to determine will be less accurate than this. However, it is usually the only method available and is better than none.

The operating engineer should then read the pressure gauges on the suction line to the pump and the discharge line from the pump and from these obtain the total head. Usually the suction and discharge openings of the pump will be sufficiently close to being the same size that corrections for velocity head are negligible. Therefore, referring to the pump curves will give a rough approximation of the quantity of water being circulated.

The operating engineer is usually more fortunate with the water temperatures, having thermometers, or temperature recording instruments in the pipe lines. If these have been calibrated, he should be able to determine the temperatures with a reasonable degree of accuracy.

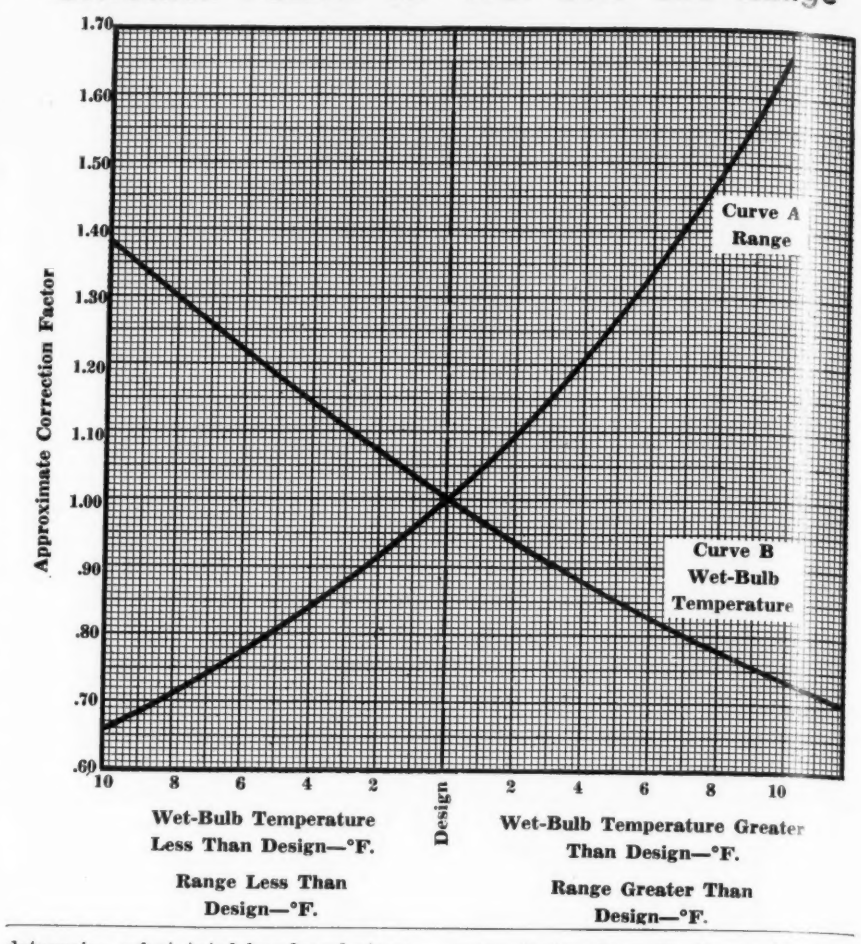
There remains, then, only the problem of determining the wet-bulb temperature of the air entering the tower and this is usually done with a sling psychrometer.

Now, with the operating conditions determined as accurately as possible, the engineer finds that none of them match the design conditions. The quantity of water is off a few per cent from the design quantity, the cooling range is quite different from the design range and the wet bulb, in most cases, will be much less than the design wet bulb. Therefore, the operating engineer is at a loss as to how to proceed.

If he is concerned with the tower performance, he may write to the factory, asking the tower manufacturer whether the data which he has obtained indicates that the tower is

(Continued on next page)

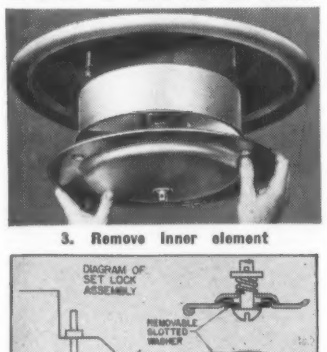
Correction Factors for Wet Bulb and Range



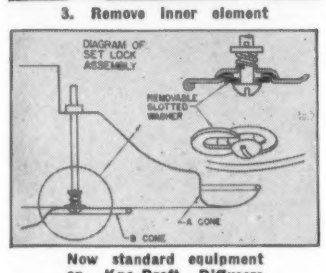
at NO EXTRA COST
The new quick-opening set-lock assembly on the Kno-Draft Air Diffusers

1. Remove cover cone (if used)

2. Press "B" cone—slip out washers



3. Remove inner element



Now standard equipment on Kno-Draft Diffusers

Cuts installation and maintenance time

Instant Cleaning and Inspection: With the new quick-opening Type HD set-lock assembly, the inner element of the Kno-Draft Adjustable Air Diffusers can be quickly removed and reinstalled while the diffuser is in place without affecting its adjustment.

It takes but a minute-requires no tools: The "B" cone or inner element of the diffuser is secured to the combined suspension and adjustment screws by a springloaded catch which is kept in compression by a slotted washer. The holes in "B" cone pass over the bolt heads. All you do is press up on cone "B" and insert or remove washers.

Visit booths 427-429 at the 9th International Heating, Ventilating & Air Conditioning Exposition, International Amphitheater, Chicago, Jan. 24 to 28.

FREE HELPFUL LITERATURE

☐ **Bulletin K-21:** Details on Type HD Set-Lock Assembly.

☐ **New handbook on air diffusion:** Shows how to create "custom-made" air patterns and eliminate drafts.

W. B. Connor Engineering Corp.
Dept. A-106, 112 East 32nd Street, New York 16, New York
Please send me the free literature I have checked above.
Name .....
Company .....
Street .....
City ..... Zone ..... State .....

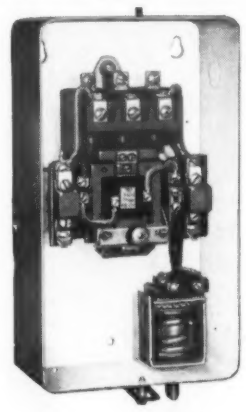
W. B. CONNOR ENGINEERING CORP.
Air Diffusion • Air Purification • Air Recovery
112 East 32nd Street — CONNOR — New York 16, N. Y.
IN CANADA: Douglas Engineering Co., Ltd., 190 Murray Street, Montreal 3, P. Q.

PRECISION • PERFORMANCE • PERMANENCE

Refrigeration products bearing the Larkin insignia may be depended upon to function flawlessly. Originator of the patented Cross Fin Coil, Larkin also instills the same exacting quality in Humi-Temp Forced Convection Units — Bare Tube and Zinc Fused Steel Plate Coils — Instantaneous Water Coolers — Air Conditioning Units — Evaporative Condensers — and other mechanical facilities for efficient commercial and industrial refrigeration.

LARKIN COILS
519 MEMORIAL DRIVE • S•E •
ATLANTA • GEORGIA

PRESSURE & TEMPERATURE SWITCHES
in many standard types to fit your special requirements



High pressure cutout and starter in same enclosure; similar combination offered for temperature control. Also available with pressure and temperature cutouts in same enclosure.

Bulletin 836 Pressure Switch (right) is a high-quality unit for pressure control of gases, steam, liquids, etc. It is available with internal or external adjustment, and operates with positive snap action.

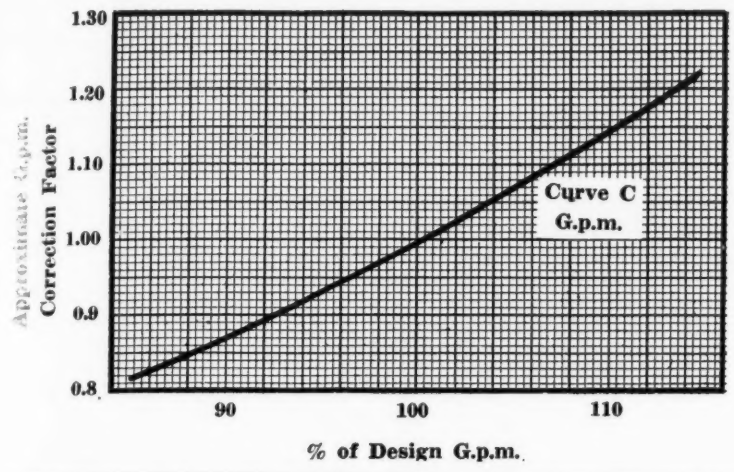
Bulletin 837 Temperature Switch (left) is similar to the pressure switch in construction and quality. Both units are available in a variety of types and ranges that meet the demands of air-conditioning and refrigeration engineers. Send for Bulletins 836 - 837. Allen - Bradley Co., 1313 South First Street, Milwaukee 4, Wisconsin.

ALLEN-BRADLEY MOTOR CONTROLS
for Air-Conditioning and Refrigeration.
Manual & automatic across-the-line starters.
Compression-type velvet-smooth starters.
Pressure and temperature switches & controls.
Relays and contactors from 1 to 8 poles.
Push buttons and selector switches.

A-B Quality

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
QUALITY

This Curve Corrects for Water Flow



Three Curves Provide Correction Factors To Determine Efficiency of Cooling Tower

(Continued from preceding page)

performing as designed. The manufacturer realizes the difficulties in obtaining correct data from the experience of his test engineers.

It takes a good experienced test engineer with special instruments several days to obtain enough and sufficiently accurate data to be able to state that the tower is or is not doing its duty. Few towers are tested because reasonably accurate results are so difficult to obtain.

The manufacturer will, therefore, check the information which is given and if he finds that it does not coincide with his established data, will probably cite the inaccuracies of the test as a part of his comments.

'A VERY ROUGH CHECK'

However, we are presenting here for your consideration and use, three curves which we trust will be of some assistance to you in checking the cooling tower performance from your installed instruments. It is best to keep in mind that at best this is a very rough check and is meant to cover all possible conditions within a relatively short distance from the design conditions.

Suppose we assume, for the tower which was mentioned above, that our test data showed that 990 g.p.m. of water were being circulated and that the water is being cooled from 86° to 78.5° at a 70° wet-bulb temperature.

We observe that 990 g.p.m. is 10% over the design quantity. Referring to curve C we get a factor of 1.15.

We also observe that the cooling range is 7½° rather than 10° as designed, and looking at curve A we get a correction factor of .90. We also observe that the wet-bulb temperature test conditions is 8° less than the design wet-bulb temperature. From curve B this gives us a correction factor of 1.30.

HOW CORRECTION FACTORS CHECK EFFICIENCY

Now all the correction factors are multiplied together and then multiplied by the design approach to the wet bulb. The result is the expected or predicted approach to the wet bulb under the test conditions and in this particular case is 9.4°. This, compared with the test approach of 8.5°, shows that the cooling tower is doing slightly better than was expected.

The curves which have just been used are presented only as a rough and approximate check and they should be used with that in mind. If you have conditions which do not lie within the range of these curves, then refer them to the manufacturer of the tower. Do not attempt to extrapolate the curves.

PLACING A NEW TOWER IN OPERATION

Lubrication: Check the lubrication of the entire fan assembly, including motor, speed-reducer, and shaft, following the manufacturer's instruction book, and also checking the specifications of the lubricating oil against what the vendor specified.

Cleaning: The entire piping system should be thoroughly cleaned on a new installation. The tower interior should be clean and especially the water basins and water distribution system. Debris will accumulate in the water distribution system and will impair the distribution, making the tower operation uncertain and not in accordance with the intended design conditions.

PREPARING WATER SYSTEM

Water distribution system: Fill the water supply system, eliminating air pockets in the piping wherever possible. Bring the water to the proper level in the basin, check the float control valve to see that it is free to operate and that it will shut off the water or admit water at the proper level. Check the overflow connection to see that it is open and that it will limit water to the proper level.

Start the circulating water pump in accordance with the manufacturer's operating procedure. Regulate the water flow to the various cells of the tower by adjusting the valves in the pipeline to each cell. Adjust the movable baffles or gates in the distribution system to correct the water distribution within each cell.

To determine whether the distribution is correct, observe the distance traveled by each stream of water emerging from the distribution system. When satisfied that the water is being evenly distributed, put the fan into operation.

CHECK MECHANICAL PARTS FOR FREEDOM OF ROTATION

Mechanical parts: Check the mechanical parts for freedom of rotation by spinning the fan by hand. The fan should move freely with very little effort. Check to see that there are no interferences in the structure. Spin the fan momentarily by turning on the current to check the direction of the fan rotation. After these have been checked the fan assembly is ready to be operated.

Initial running period: After a few minutes of operation, shut down the fan assembly checking the temperatures of the bearings against the nameplate data or data given in the manufacturer's instruction book.

Placing tower in operation: Shut tower down after approximately 150 hours of operation to replace oil in the rear reducer and to clean the debris screen, basin, and water distribution system. The tower will now be ready to operate for an extended period of time.

Resuming tower operation after a short shutdown: Review operating records to determine whether the tower was operating successfully and without trouble during previous periods of operation. If so, make a cursory inspection and commence operation.

Resuming operation after a long period of inactivity: Follow the same procedure as for placing a new tower in operation.

SECURING FAN ASSEMBLY

Frequently in cold weather it is unnecessary to operate the fan in order to obtain the proper cooling. At such time, it is reasonable to completely check the lubrication and to paint any of the metal parts which show evidences of corrosion.

Wrap tarpaulin around the motor to prevent accumulation of ice and snow from getting into the motor. Cover the inlet louvers with a tarpaulin to prevent icing of the tower. New C. H. Wheeler towers may have an auxiliary slot in the louver support if desired so that the louver opening can be easily closed. It will be found that ample cooling will result if the tower is secured this way in cold weather.

SHUTTING DOWN ENTIRE TOWER

A complete shutdown is an excellent time for a thorough inspection and maintenance effort to be made. The tower should then be placed in first-class condition ready for the next period of operation.

(To Be Continued)

Acme

FREON OIL SEPARATORS

Double filter for double efficiency. Maximum separation of oil from refrigerant vapor. Six models meet all requirements for installations from ¼ HP up to 10 HP. All installations can be serviced at moderate cost. Underwriters laboratories approval seal on each model.

ACME PRODUCTS

ACME INDUSTRIES, INC.
Jackson, Michigan
Representatives in all principal cities

SCHNACKE
COMPRESSORS AND CONDENSING UNITS
Now Available with
THERMATROL
CAPACITY CONTROL

1-*Improves Refrigeration System Efficiency*
2-*Eliminates Unnecessary Cycling*
3-*Reduces Electric Current Consumption*

THERMATROL maintains even Evaporator Temperature

These are some of the "plus" advantages now available in all SCHNACKE improved Compressors and complete Condensing Units.

For long wear and greater operating efficiency, SCHNACKE Compressors have replaceable, refrigerant-cooled steel cylinder sleeves, balanced forged crankshaft, sealed crankcase, positive pressure lubrication, and many othr advanced features. Compressor models available from 5 to 50 H.P.

SCHNACKE Condensing Units are complete with cleanable type fin tube condensers mounted in sturdy base, water control valve and pressure controls. Models available from 5 to 25 H.P.

Write SCHNACKE, INC., 1016 E. Columbia St., Evansville, Indiana, for engineering details.

SCHNACKE, INC.

HOLD EVERYTHING!

...till they open that door

on three great new refrigerated packages . . . USAIRCO refrigerated upright store conditioners, and window and console types of refrigerated room coolers.

All three have been created and engineered by Mr. "X", one of the industry's most talented designers. Their chassis is the very essence of efficient dependable performance . . . their housing a triumph in industrial design.

Book no orders until you see them. You can expect great new units packed with selling power.

USAIRCO
THE INDUSTRY'S MOST PROGRESSIVE PRODUCER OF SOUND VALUE

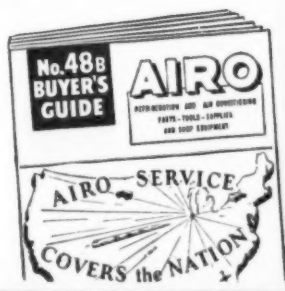
UNITED STATES AIR CONDITIONING CORPORATION
Como Avenue S. E. at 33rd, Minneapolis 14, Minnesota

REFRIGERATION AND AIR CONDITIONING
UNITS • PARTS • TOOLS • SUPPLIES

AIRO CATALOG 48-B
CAN HELP YOU SAVE YOUR VALUABLE TIME!

Why spend valuable business hours and car expense on trips to buy parts? Get fast low-cost delivery from our large, complete stocks. Airo serves buyers in 48 States and overseas.

WHOLESALE ONLY
PLEASE WRITE ON YOUR LETTERHEAD



AIRO SUPPLY CO.
2732 N. ASHLAND AVENUE • CHICAGO 14, ILL.

Goodrich Becomes Sales Head At Division of Yates-American

BELOIT, Wis. — K. C. Goodrich, formerly assistant to the sales manager of General Refrigeration Division Yates-American Machine Co., has been appointed sales manager, the company announced,

F. A. Smith Co. Changes Name

ROCHESTER, N. Y.—F. A. Smith Mfg. Co., Inc. has announced a change of name to Fasco Industries, Inc.

The change, according to the company, will bring the corporate name into closer conformity with the trade mark "Fasco."

Airo Catalog Features Simplified Arrangement

CHICAGO—Airo Supply Co. here has announced publication of its new Fall Catalog 48-B, which is said to embody a simplified arrangement and classification of merchandise.

James H. Roche of the firm's advertising department said that merchandise is grouped by lines with similar lines placed close together for comparison purposes.

The catalog also contains two pages of simplified refrigeration tables intended to help engineers figure cooler and sharp-freezing estimates, he added.

Copies can be obtained from the company at 2732 N. Ashland Ave.

Allied Supply Changes Structure To Add Lines

DAYTON, Ohio—Effective Dec. 1, Allied Supply Co. here, refrigeration supplies and washing machine parts wholesaler, will cease operating as a partnership and will become a corporation, it was announced by W. V. Homan, treasurer.

Homan said the firm, which is being incorporated at $100,000 of capital stock, will continue to function under the same guidance and personnel. In addition to Homan, officers include John L. Homan, president, and J. W. Van DeGrift, secretary.

"We are forming this new corporation in order to enable us to handle more lines of merchandise, principally along the product field," W. V. Homan explained. "We have experienced a small amount of business in this product line and feel that a percentage of the wholesaler's business must be derived from this source."

Gillespie Named Sales Mgr. For Watson-Stillman Co.

ROSELLE, N. J.—Appointment of J. T. Gillespie, Jr. as sales manager of Watson-Stillman Co. here has been announced by A. G. York, vice president in charge of sales. The previous sales staff remains unchanged.

For 10 years prior to joining Watson-Stillman, Gillespie held sales and administrative positions with Air Reduction Co., Inc., New York City, and Wilson Welder & Metals Co.

Bergman Opens NYC Store

NEW YORK CITY—Murray Bergman of Wholesale Distributors, Inc., Jamaica, N. Y., has announced the opening of his new store at 698 Tenth Ave., corner of 49th St. here.

The new outlet will be under the supervision of "Lenny" Bergman and will handle a complete stock of refrigeration supplies, coils, and blowers. Telephone number is Plaza 7-4820-1-2.

Philadelphia Gets New Hajoca Branch Warehouse

PHILADELPHIA — Hajoca Corp., which now boasts 31 wholesale distribution centers for plumbing, heating, and refrigeration supplies ranging from Newark to Tampa, has announced the opening of a new branch warehouse and sales office at 225 W. Erie Ave. here, in the geographical center of the city.

The building, said to be the last word in design, contains 124,000 sq. ft. of floor space under one roof, housing offices, display rooms, commodious counter facilities, and warehouse, as well as a completely modern pipe fabricating plant capable of handling up to 24-in. diameter pipe, and the company printing plant.

Thorough mechanization for efficient materials handling includes a giant magnetic hoist operated from an 80-ft. bridge crane, covering a loading area of 24,000 sq. ft. Numerous other hoists, cranes, and monorail equipment are used throughout the plant.

Seven freight cars may be loaded or unloaded simultaneously within the building with further accommodations for two cars at an outside platform. Shipping and receiving departments are strategically located to permit the uninterrupted flow of materials in one direction.

Show windows, extending 200 ft. along heavily traveled Erie Ave., concentrate attention on Hajoca's diversified lines in the daytime while a 23 ft. high floodlighted replica of the famous Hajoca trade-mark reminds the night passers-by of Hajoca's 90-year record of achievement in the wholesale fields.

Momsen Bros. Take Over Southwest Wholesale Firm

PHOENIX, Ariz.—Momsen brothers and associates have purchased the interests of the Dunnegan and Ryan families in the appliance and hardware wholesaling firm of Momsen, Dunnegan, and Ryan here, the company has announced.

New officers of the firm are Gus Momsen, president; Rueben F. Momsen, vice president and treasurer; Leo J. Momsen, vice president and secretary; A. A. Martin, vice president; and A. J. Murray, vice president and sales manager.

The firm has offices and warehouses in Albuquerque, N. M., and El Paso, Texas, as well as here.

Chase Establishes Sales Promotion Department, Puts Rylander In Charge

CHICAGO — Chase Refrigeration Supply Co. here has announced the opening of a new sales promotion department headed by Lloyd C. Rylander, formerly of the C. R. Markham advertising agency here.

In his new post Rylander will assume responsibility for the publication of a company catalog for 1949 and the publication of a monthly house organ for customers. The latter will feature current price information on company handled products, service news, service tips, and special merchandise offerings, according to Jack Glass, manager.

In his previous position, Rylander handled numerous space accounts for the refrigeration industry and also worked on the preparation of wholesale refrigeration supply catalogs.

Simons Adds W. F. Siddall To Sales Engineering Force

HARTFORD, Conn. — W. F. Siddall has been added to the sales engineering force of the Joseph Simons Co. here, Joseph Simons announced recently. The firm handles refrigeration equipment, parts, and supplies at wholesale. Siddall, according to Simons, has served in the refrigeration supplies field for many years.

W. F. Siddall

Lennox Furnace Readies Site For Warehouse Addition

SYRACUSE, N. Y.—Site preparation has been started for a large warehouse addition to the Lennox Furnace Co. plant on N. Midler Ave. here. The new building, 480 ft. long and 80 ft. wide, will be on a tract of 19 acres just northeast of the present plant.

The construction will be of aluminum panel walls. The unit is reported to be the first in the company's long-range relocation plan.

Lennox manufactures steel furnaces and air conditioners with plants in production at Marshalltown, Iowa, in Ohio, and here.

Buffalo Heating Contractor Files Voluntary Bankruptcy Petition

BUFFALO — Salvatore Pasquale Lucca, heating contractor, doing business as Niagara Heating & Appliance, has filed a voluntary petition in bankruptcy in Federal Court, listing liabilities of $9,062 and assets of $4,500.

Double Feature! TODAY AND EVERY DAY

THAWZONE PATENTED The PIONEER FLUID DEHYDRANT

THAWZONE, the moving dehydrant, circulates and searches out moisture, destroying it chemically. For new and reconditioned units, as well as old.

TRACE REFRIGERANT LEAK DETECTOR

TRACE is a highly effective refrigerant leak detector. Its stable, red color reveals leaks promptly in old or new systems.

HIGHSIDE CHEMICALS CO.
195 VERONA AVE. NEWARK 4, N. J.

Your Equipment is NOT COMPLETE without . . . .

THE MIDGET PURGER

The Midget is the companion or sister product to the Little Giant Purger. The Little Giant, previously introduced, is for purging the larger units, but the Midget is a low cost, water cooled purger designed for economical operation for the smaller or fractional units up to 10 hp.

The Midget Purger provides positive and complete purging of the refrigerating system with minimum loss of refrigerant.

Purging is an operation familiar to all refrigeration men. With the standard purging facilities it is usually impossible without an appreciable loss of refrigerant.

When non-condensable gases are present in a refrigerating system, it will operate at higher pressures than if these gases were not present. Unnecessarily high pressures result in the compressor being subject to:

Higher bearing loads. Higher discharging temperatures. Increased wear on moving parts. Greater power consumption.

HERE ARE THE ADVANTAGES OF PURGING WITH THE MIDGET PURGER

THERE IS NO GUESSING—By bleeding off the gases through the purge valve until the liquid rises to the top, you have a positive indication when purging is completed.

MINIMUM REFRIGERANT LOSS—The air in the system is completely separated from the refrigerant before the purge valve is opened.

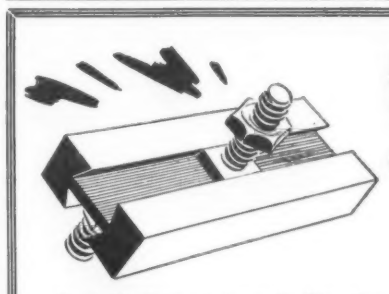
SIMPLE TO OPERATE—All operating valves easily accessible. Not necessary to check pressures or temperatures. No need to shut down the system.

POWER SAVINGS—Power savings, due to a reduction in head pressure will pay for the "MIDGET PURGER" many times over.

MANUAL OPERATION—Fully manually operated, there is no possibility of a slow leak developing which would cause a loss of refrigerant before the trouble is located.

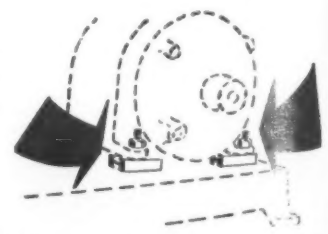
ORDER THROUGH YOUR WHOLESALER

MUELLER BRASS CO.
PORT HURON, MICHIGAN



Have You Tried the Motor Base Adapter Plate?

(3 sizes to fit 1/6 to 3 h.p. motors)



Install that motor; it fits the base—any base. No drilling or filing. No holes out of line. No rotor shaft too long or too short. Carry motors and adapters in every service car.

Servicemen in Connecticut, Maryland, New Jersey, and New York contact these wholesalers

Aetna Supply Co., New York City
Harry Alter Co., New York City
Fideico, Inc., New York City
Excel Refrig. Supply Co., Brooklyn, N. Y.
Central Supply Co., Inc., Syracuse, N. Y.
Jordan Supply Co., Buffalo, N. Y.
R. D. Marshall Co., Albany, N. Y.
Resco, Inc., New Haven, Conn.
Jos. Simons Co., Hartford, Conn.
Electric Motor & Parts Co., Newark, N. J.
Electric Products Co., Inc., Jersey City, N. J.
Holl-Ines Distributors, Dumont, N. J.
Jaeger's Sales & Supplies, Trenton, N. J.
Tesco Distributors, Newark, N. J.
Union City, N. J.
Patterson, N. J.
Wallwork Bros., Inc., Newark, N. J.
Baltimore Refrig. Supply Co., Baltimore, Md.
Roche & Hull, Inc., Baltimore, Md.
Harry S. Ekiof Co., Baltimore, Md.

INQUIRIES FROM JOBBERS INVITED

MOTOR ADAPTER CORPORATION
4730 JOY ROAD DETROIT 4, MICHIGAN TYLER 6-1224

Norge '49 Models--

(Concluded from Page 1, Column 2)

stage money, Clary explained. Then complete sales information will be outlined by each product manager. At the close of each day, a pseudo radio quiz program will be held, and contestants will have opportunities to increase their "grub stake" holdings.

Near the end of the convention, an auction will be conducted with wholesalesmen bidding their stage money winnings for a variety of prizes. Available for "purchase" will be such things as watches, traveling bags, electric clocks, binoculars, carving sets, and other valuable products.

"Naturally," Clary said, "the man who absorbs the most product information will acquire the most 'money' and will be in a position to outbid others for most-desired prizes."

Purpose of the three-day convention will be to present the company's new line of household appliances to distributors and their salesmen in advance of dealer introduction at the Midwinter Furniture Show in Chicago in January.

In addition to presentation of complete product information by product sales managers, all other phases of Norge's anticipated merchandising program for 1949 will be explored and outlined fully. These will include advertising, sales promotion, and sales training, market research, service, and finance.

The first day of each convention will be devoted to an over-all analysis of politics, plans, and product highlights. In the succeeding two days, efforts will be concentrated on thorough indoctrination of distributor wholesalesman into operating characteristics and other sales features of the complete product line. Refrigerators, electric and gas ranges, laundry equipment, home heaters, electric water heaters, freezers, and water coolers are produced and sold by the company.

The convention meetings were planned under the direction of Clary with the assistance of W. S. Law, general sales manager, and C. H. MacMahon, advertising and public relations director. Besides the above, featured speakers on the program will include H. E. Blood, president, John Park, secretary and treasurer, John A. Drake, market research director, and T. F. Johnson, national service director.

New Norge Automatic Washers List at $339.95

DETROIT—The new Norge automatic washer, now being introduced to the field in distributor showings, will carry a retail price of $339.95. This price includes normal installation, demonstration, and a one-year warranty.

Dealers have seen the new washer at distributor showings in New York City, St. Louis, Chicago, Pittsburgh, and Milwaukee, and showings will be held in other centers very shortly.

Norge will stress the large capacity (18 pounds) of its washer, plus the "large drop" in the washing action.

TOP SELLING LINE FOR '49
DAIRY WALL CASES • FREEZERS • SELF SERVICE CASES • FULL VISION CASES • VEGETABLE CASES • SELF-CONTAINED OR REMOTE
COLD-IN
YOUR KEY TO BETTER REFRIGERATION
COLDIN CABINET CO., INC.
2800 Webster Avenue, Bronx 58, N. Y.

Available from 1/2 to 10 H.P.
CLEANABLE DOUBLE-TUBE COUNTER-FLOW WATER-COOLED CONDENSERS
Write for literature
Halstead & Mitchell
BESSEMER BLDG.
PITTSBURGH 22, PA.

U.S. Official Predicts Stricter Enforcement Of Patman Act In '49

NEW YORK CITY — Stricter enforcement of the Robinson-Patman Act intended to prohibit price discriminations between buyers and amendments to tighten its application appear likely next year, government sources both here and in Washington have indicated.

Austin H. Forkner, attorney of the Federal Trade Commission, told the Sales Executives Club here recently that buyers as well as manufacturers are liable to prosecution if they knowingly receive goods at discounts that are not offered to others.

Action against offending buyers could be taken upon complaint to the FTC or through a suit for triple damages by an injured competitor, he said.

"The innocent buyer has nothing to fear even if he receives a better price, but a knowing one had better be prepared to put in a cost justification or other defense," he declared.

He added that FTC recommendations for tightening up enforcement machinery will probably be renewed when the next Congress convenes.

In Washington, the House Small Business Committee, which Rep. Wright Patman, one of the authors of the act, is expected to head in the next Congress, announced that Patman would propose amendments to the act that would require full disclosure to customers of all sellers' discounts and would prohibit chain stores from deducting losses incurred from selling below cost from their gross earnings.

Clothes Driers, Ironers, Vacuum Cleaners Lead In Chattanooga Sales

CHATTANOOGA, Tenn. — Clothes driers, vacuum cleaners, and ironers were the only major appliances to show sales gains during September in a local picture of generally declining sales, according to figures released by the Electric Power Board of Chattanooga.

Clothes drier sales advanced 82% during the month, followed by vacuum cleaners at 32% and ironers at 30%. Water heater sales held even.

Appliances whose sales totals failed to reach August levels were clothes washers, down 3%; ranges, down 6%; refrigerators, down 7%; and home freezers, down 30%.

On the commercial side, only refrigerators gained over August. Air conditioning units, freezing cabinets, beverage coolers, ice makers, and water coolers all declined.

Unit volume, with average unit price and total sales value, on this equipment was as follows:

Appliance	Units Sold	Average Unit Price	Total Sales Value
Refrigerators	607	$ 286.20	$173,720.65
Home Freezers	27	334.68	9,036.49
Ranges	733	253.71	185,966.70
Water Heaters	274	124.10	34,002.75
Ironers	47	163.16	7,668.34
Vacuum Cleaners	921	73.34	67,533.75
Clothes Washers	1,006	169.84	170,687.96
Clothes Driers	31	209.36	6,490.23
Air Conditioning Units	14	1,148.46	16,078.38
Refrigerators, Com'l	8	1,035.06	8,280.49
Ice Cream Cabinets	3	309.67	929.00
Freezing Cabinets	2	747.50	1,495.00
Soda Fountains	3	3,850.00	11,550.00
Beverage Coolers	51	244.17	12,452.38
Ice Makers, Water Coolers	1	113.75	113.75

Oil Heating Group, FTC Discuss Proposed Code

WASHINGTON, D. C. — The oil heating appliance industry is carrying on discussions with the Federal Trade Commission about a proposed industry code to be administered by that agency, it has been reported here.

Discussions have centered about the misuse of the word "free" in advertising oil heating appliances and below cost selling to discourage competition. The proposed code would also ban "loss leader" selling.

How to distinguish between genuinely free offers and those that have strings attached and complaints against some large oil dealers who are accused of installing heaters at charges far under the usual rate in order to increase their gallonage were at the core of the discussions.

Increasing Competition Forecast--

(Concluded from Page 1, Column 5)

consumer resistance to high appliance prices, pointing out that dealers are still selling appliances at up to four times their prewar rate.

Though Newcomb felt that electrical appliances will be "running out of our ears before 1949 is passed," he believed that refrigerators will be in very short supply through the peak spring and early summer selling season—even if steel should suddenly become available in unlimited supply.

"To be sure, the demand, or sales, may fall off during these next few months, but it will still be far greater than what it ever was under normal conditions," he explained.

"Furthermore, manufacturers' and distributors' inventories will, by comparison to a normal year, be next to nothing. As a result, little or no cushion will be available for the high peak seasonal demand, and current production cannot, in my opinion, be accelerated to meet it."

J. R. Cobb, manager of farm market sales, Frigidaire Div., General Motors Corp., predicted that 85% of the farms in 13 southeastern states will have electrical service by 1951. Fifty-eight per cent have electricity now, he said.

"Appliance dealers today are very much concerned with the problem of selling and installing major appliances in farm homes where the wiring system is not adequate for these appliances," he asserted.

"All appliance dealers are looking to the utilities for leadership in carrying on more aggressive, educational programs on adequate farmstead wiring."

Truesdell, in his talk, pointed out that 20% of range sales are now going to the farm home.

Wells M. Stanley, vice president of the Alabama Power Co., reported on the exchange's heat pump project. He said the project is studying heat sources to determine the best for residential installations in the Southeast, means of controlling temperature and humidity in heat pump installations, installation and operation costs, heat source and pump unit performance, and occupant's reaction to the heat pump and its performance.

The project also includes drawing up a guide for the use of utilities in heat pump installation problems.

Stanley asserted that the heat pump problem boils down to obtaining the most economical heat source and the highest possible seasonal coefficient of heat pump performance.

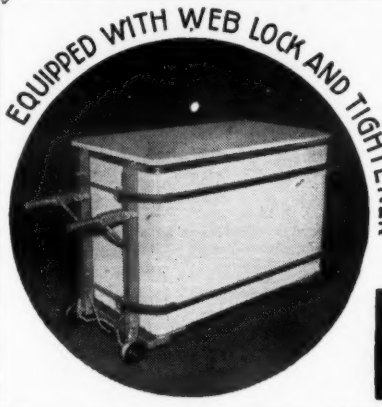
Thor Quarterly Sales Up $2 Million over 1947, Hit Total of $10,011,126

CHICAGO — Net sales for the quarter ending Sept. 30, were nearly $2 million higher than in the same period last year, reaching a total of $10,011,126, the Thor Corp. reported to stockholders recently.

At the same time, net income, after taxes, rose from $676,746 for the third quarter of 1947 to $796,532 for the same period this year. This represented $1.53 earned per share last year and $1.81 per share this year.

For the six months ended June 30, the company reported sales of $18,920,900 and a net income of $1,428,052, or $3.24 per common share.

Though sales amounted to only $16,246,724 for the first half of last year, net income was $1,607,909, or $3.64 per share.

EQUIPPED WITH WEB LOCK AND TIGHTENER

Are You Looking for An Easy Way to Handle Stoves, Refrigerators and Freezers
Solve Your Problem with the New
ROLL-OR-KARI Dual Trucks
Patented Step-On-Lift • Folding Handles
Capacity 1000 Lbs. • Shipping Weight 40 Lbs.
WRITE TODAY
THE ROLL-OR-KARI CO.
MANUFACTURERS
ZUMBROTA • MINNESOTA

FOOD LOCKERS
PRODUCE
HOTEL

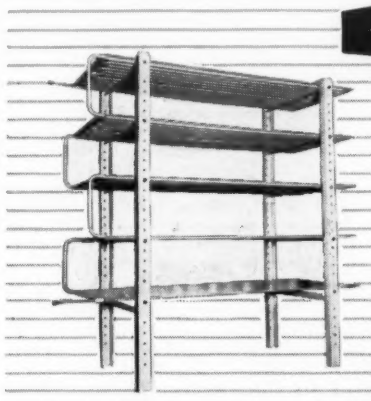
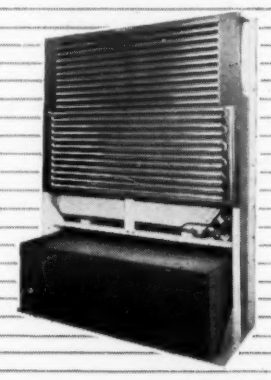
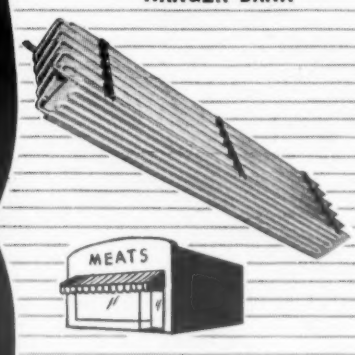
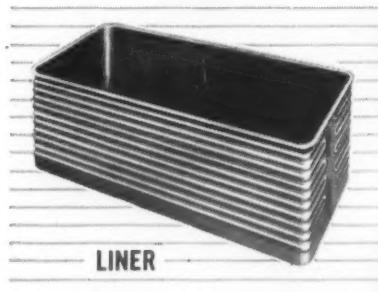
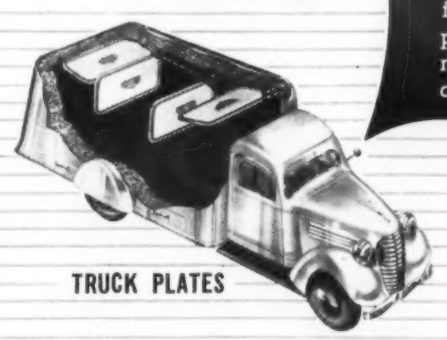
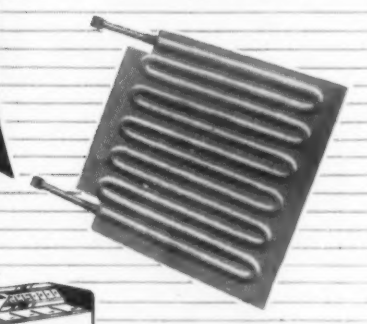
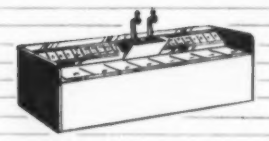




PLATE STAND
PAKAGE UNIT
KOLD-HOLD
builds better plates for every application
There are two big reasons why you can count on the performance of Kold-Hold Hold-Over and evaporator plates fo every refrigerating installation.
FIRST: They are designed and engineered primarily to refrigerate efficiently and economically.
SECOND: They are built with care and to quality standards which assures that each and every Kold-Hold plate does its designed job to the fullest degree of satisfaction. Before any plate leaves the factory it is pressure tested under water and completely dehydrated.
This combination of engineered design and controlled construction is your best guarantee of peak performance.
Would you like to know more about how Kold-Hold plates can be used for quick freezing, chilling and holding, short period cooling, or for "Hold-Over" truck refrigeration? Complete descriptive literature is yours free — write today!
FROZEN FOODS
HANGER BANK

MEATS

LINER
MEATS
CONVERSION UNIT


TRUCK PLATES

KOLD-HOLD
Jobbers in Principal Cities
PROCESSING
TRANSPORTATION
STORAGE
protects every step of the way
KOLD-HOLD MANUFACTURING COMPANY - 500 E. HAZEL ST., LANSING 4, MICHIGAN

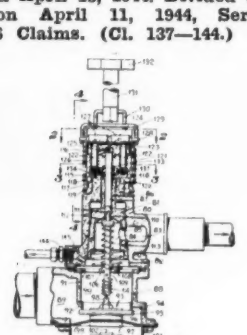
PATENTS

Week of August 17

2,447,170. PROCESS OF FREEZING LIQUID AND APPARATUS THEREFOR. Russell Paul Dunmire, Orange Ohio. Application August 24, 1943, Serial No. 499,799. 13 Claims. (Cl. 62—172.)

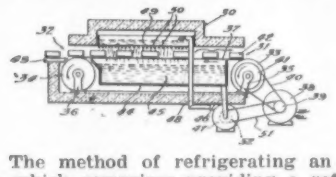
1. The herein disclosed process employing a receptacle consisting of a device for making an ice cake or block comprising a container and a closure therefor, which consists in filling the container with the liquid to be frozen to a level within a range fixed by the pressure which must be imposed on a body of air trapped in said container to overcome the bond between the container and an ice cake or block therein and positioning the closure on the open end of said container, then inverting the receptacle, whereby a sealed space filled with air is provided between the bottom of the container and the body of liquid and atmospheric pressure seals the closure in position, and finally freezing the liquid into solid form, thereby expelling air contained in the liquid into said space and compressing all of the air in said space to said bond breaking pressure.

2,447,207. FLUID CONTROL VALVE. William A. Ray, Los Angeles, Calif., assignor to General Controls Co., a corporation. Original application Nov. 6, 1940, Serial No. 364,524, now Patent No. 2,346,704, dated April 18, 1944. Divided and this application April 11, 1944, Serial No. 530,532. 6 Claims. (Cl. 137—144.)



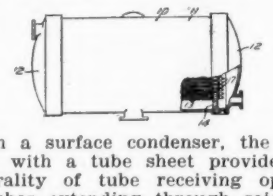
1. In a valve structure, in combination: an elongated body; a plug seated in one end portion of said body and rotatable on the general axis of the body to normally control flow through said structure; a safety valve closure reciprocable generally along the axis of said plug in the opposite end portion of the body and effective, when seated, to obstruct flow through the structure; means for temporarily maintaining said safety closure in open position; an elongated member sealingly reciprocable in an axial opening through said plug, one end of the member extending exteriorly of the body at said one end thereof and there being provided with a head, the other end of the member being operatively engageable with the safety closure; a cap rotatably mounted on said one end of the body and having a connection for rotating said plug, said connection permitting limited rotation of the cap with respect to the plug; and cam means cooperating with said head and said cap whereby, when the cap is rotated while the plug is in flow-obstructing condition, said member is operated to effect movement of the safety closure to said open position.

2,447,249. METHOD OF REFRIGERATING AN ARTICLE BY CONTACT WITH A VAPORIZABLE REFRIGERANT. Robert H. Hill, Elgin, Ill., assignor to The Marison Co., Elgin, Ill., a corporation of Illinois. Application Oct. 13, 1944, Serial No. 558,566. 2 Claims. (Cl. 62—173.)



1. The method of refrigerating an article which comprises providing a refrigerant which is adapted to pass from liquid to gaseous states, said refrigerant being provided in a chamber in both liquid and gaseous states, precooling the article with the gaseous refrigerant while moving the article through a portion of the chamber, then continuously wetting the article with the liquid refrigerant during its movement throughout the remaining portion of the chamber and regulating the final average temperature of the article by the speed at which it is moved through the refrigerant.

2,447,259. CONDENSER. Charles E. Lucke, New York, N. Y., assignor to Worthington Pump and Machinery Corp., Harrison, N. J., a corporation of Delaware. Application Feb. 12, 1945, Serial No. 577,412. 2 Claims. (Cl. 285—30.)

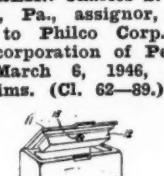


1. In a surface condenser, the combination with a tube sheet provided with a plurality of tube receiving openings, and tubes extending through said openings, of means connecting each of said tubes to said tube sheet to permit movement of the tubes relative to the tube sheet comprising a tubular sleeve of flexible material extending through a tube receiving opening in the tube sheet and having its inner end bonded to a tube, the outer end of said flexible sleeve having an annular laterally extending flange thereon, said flange being bonded at its perimeter to said tube sheet to provide a flexible fluid tight seal between the tube and sheet.

2,447,278. AIR CONDITIONING APPARATUS. Richard F. Roper, Washington, D. C. Application April 27, 1945, Serial No. 590,697. 10 Claims. (Cl. 62—129.)

1. The combination with an air cooling and conditioning unit, adapted to be positioned in a room in a building, and including means within the unit for circulating indoor air to be cooled and conditioned from and to the room in which the unit is positioned, of conduit means connected to the unit and leading to and from another room, and valve means associated with the conduit means for circulating the indoor air alternately from and to the first mentioned room and from and to the second mentioned room

2,447,335. REFRIGERATING APPARATUS WITH MEANS FOR INDICATING THE QUANTITY OF SOLID REFRIGERANT THEREIN. Charles S. Heilig, Jr., Upper Darby, Pa., assignor, by mesne assignments, to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application March 6, 1946, Serial No. 652,354. 6 Claims. (Cl. 62—89.)



1. Heat exchange apparatus for use in refrigerating systems, said apparatus comprising a vessel containing a normally fluid substance congealable at a predetermined relatively low temperature and characterized by latent heat of fusion sufficiently high to provide substantial refrigerating effect during the melting thereof, said substance being at least partially congealed during normal operation of the apparatus, and means responsive to variations in the quantity of substance congealed to indicate the hours of refrigerating effect available.

2,447,390. LIQUID COOLED METALLIC BEER KEG. Earl E. Brand, Berlin, N. J., Application Oct. 24, 1945, Serial No. 624,315. 9 Claims. (Cl. 257—15.)

1. A liquid cooled container comprising inner and outer receptacles having top, bottom, and side walls spaced apart to form an intermediate cooling compartment, cooling tubes extending transversely through the inner receptacle and communicating with said intermediate compartment, a partition carried by the inner receptacle and extending transversely across the top and bottom thereof and vertically along the sides of said inner receptacle and engaging the outer receptacle for directing the flow of liquid in a verticle path around the inner receptacle and and across the bottom thereof, and liquid inlet and discharge pipes communicating with the intermediate compartment at opposite sides of the container and on opposite sides of said partition.

150,559. DESIGN FOR A CASING FOR A FAN OR THE LIKE. Howard W. Eckles, St. Louis, Mo., assignor to The Emerson Electric Mfg. Co., St. Louis, Mo., a corporation of Missouri. Application Aug. 1, 1947, Serial No. 140.666. Term of patent 14 years. (Cl. D26—7.)

The ornamental design for a casing for a fan or the like, substantially as shown.

Westinghouse Research Post Goes To Hallenberg

PITTSBURGH — Appointment of Edward X. Hallenberg as assistant director of the Westinghouse Research Laboratories has been announced by Dr. J. A. Hutcheson, director of the laboratories.

Hallenberg, who was formerly personnel manager at the laboratories, will serve as administrative aide to Hutcheson. In addition, he will assume responsibility for all laboratory service activities.

He was graduated from the University of North Dakota in 1937 with a degree of Bachelor of Science in electrical engineering, and he joined Westinghouse the same year at the company's Sharon Transformer division. Ultimately, Hallenberg was named assistant to manager of industrial relations. He joined the Westinghouse Research Laboratories as personnel manager in 1946.

ALCO
ENGINEERED REFRIGERANT CONTROLS
ALCO VALVE CO. ST. LOUIS

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion 50 words or under. 5¢ ea. additional word.

RATES for all other classifications $5.00 per insertion 50 words or under. 10¢ ea. additional word.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

AVAILABLE — REFRIGERATION, air conditioning and heating technician of very broad experience and training. Sales minded. Qualified to handle engineering or field service. Interested in a position where my ability can be utilized to the greatest advantage. Write BOX 3015, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

SALESMEN FOR Hussmann distributor in San Diego, California. Must have a proven record and able to furnish highest references. For such a man we have a most attractive proposition. WRIGHT REFRIGERATION, INC., 4025 Pacific Highway, San Diego, California.

WANTED ENGINEER. Old and well established dealer contractor within 1½ hours from New York wants a thoroughly experienced air conditioning, refrigeration and sales engineer. Must be capable of handling all sizes up to 50 tons. Salary and override. Permanent position to man of proven ability. BOX 2994, Air Conditioning & Refrigeration News.

ONE OF Carrier's leading distributors of air conditioning and refrigeration has opening for chief engineer who can assume full responsibility for engineering, estimating, and over-all supervision of other less experienced engineers. Applications to 100 tons capacity. Must be graduate and thoroughly experienced. Executive ability essential. We are well established and financed. Volume over $750,000.00 per year. Located in large middlewestern city. Write full details of experience in previous positions, age and remuneration expected. Your reply will be held confidential. Interview will be arranged at our expense. BOX 3007, Air Conditioning & Refrigeration News.

MANUFACTURER'S SALES agents wanted to represent well-known, reliable manufacturer of high quality freezers and milk coolers. Territories in Ohio and Indiana now open. Agents may add our line to non-competitive lines they now handle. Applicants must have a proven record in the sale of commercial refrigeration. State age, experience, location preference and lines currently handled. BOX 3008, Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVES wanted by leading manufacturer of complete low side and condenser lines. Company products are nationally advertised and enjoy excellent reputation. Territories now open, south and southeast. Our men have been informed of this ad. BOX 3009, Air Conditioning & Refrigeration News.

DISTRICT SALES manager in region consisting of Michigan, Ohio, Indiana, Kentucky, West Virginia with air conditioning and refrigeration background and proven record in sales and management. BOX 3011, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION manufacturer's representative. Contact and establish dealers in the following territories: 1. New England States; 2. Greater New York & Long Island; 3. State of Texas; 4. Northern Indiana & Illinois, Michigan, Wisconsin, Minnesota and Iowa. Must have proven sales record in commercial refrigeration. No objection to handling related but non-competitive lines. Send full details and references. BOX 3018, Air Conditioning & Refrigeration News.

SALES REPRESENTATIVE wanted by well established midwest manufacturer of automatic control valves, fittings, driers and accessory items for refrigeration and air conditioning. Territory open is metropolitan New York City and New York State. Salary, bonus and expenses. Write full particulars including past experience, record of employment and salary requirements. BOX 3019, Air Conditioning & Refrigeration News.

MANUFACTURERS' REPRESENTATIVES and sales agencies wanted by manufacturer of frozen food display cabinets, dairy cases and self-serve ice cream cabinets featuring three dimensional superstructure. Persons answering must have contact with distributors, dealers, ice cream companies, dairies. Give territory covered, experience, lines handled, references. Compensation, commission. BOX 3020, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

ELECTRIC REFRIGERATORS. Immediate delivery—all standard makes—fully reconditioned & guaranteed. Wholesale only. From $49 up. We buy & sell as-is refrigerators. APPLIANCE PROD. CORP., 59 Crosby St., NYC 12, N.Y.

BRISTOL RECORDING thermometers, remote, 7 day electric, $69. Mercoid thermostats, minus 10° to plus 40°, $15. Acme heat exchangers, 3 ton @ $27; 2 ton @ $20. Marlo E C 5 evaporative condensers, $335. Tunnel blast freezer complete 1800, basic rating, $535. New 1 H.P. to 7½ H.P. water cooled Universal and Copelands at less than distributor's cost. Used—Westinghouse 60 ton condensing unit—Bargain! 3'6" X 6'6" Jamison double batton automatic close doors with track heads for 7'2" track, 1½" cork board insulation at $85 each. New in original factory crates. Freight allowed in United States. BIMEL COMPANY, 2600 Colerain Ave., Cincinnati 14, Ohio.

SEALED UNITS rebuilt and exchanged. Prompt service on Coldspot (sealed & semi-sealed), Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 3906 Joy Rd., Detroit 6, Michigan.

FOR SALE—rebuilt and guaranteed ammonia condensing units with retubed condensers, units repainted and like new. Lipman 2¼ x 2¼, 2-cylinder units, 2 HP. @ $390.00. York 3 x 3, single cylinder units, 2 HP. @ $390.00. Frick 3 x 3, single cylinder units, 2 HP. @ $390.00. York 3 x 3, double cylinder units, 5 HP. @ $590.00. York 4 x 4, double cylinder units 7½ HP. @ $800.00. Frick 4 x 4, double cylinder units 7½ HP. @ $800.00. York 6 x 6, double cylinder units 20 HP. @ $1,500.00. Frick 5 x 5, double cylinder compressors @ $700.00. York 6½ x 6½, double cylinder compressors @ $800.00. New Baker ammonia compressors in stock, all sizes. CONNECTICUT ICE MACHINE CO., INC., South Norwalk, Conn.

MERCHANDISE FOR sale. Brand new freezer plates, all or any part: 374 19" x 30" Yoder plates: @ $3.35 each; 4 19" x 36" Yoder plates: @ $4.35 each; 112 19" x 72" Yoder plates: @ $7.00 each; 131 19" x 32" Dole plates: @ $3.75 each; 1 19" x 54" Dole plates: @ $5.35 each; 44 19" x 78" Dole plates: @ $8.00 each. All Yoder plates fitted with two ½" male copper tube connections and one 19" end. All Dole plates fitted with two ½" female pipe connections on the 19" end. All plates for use in vertical installations. Send checks or deposit with order to CROWN REFRIGERATOR CORPORATION, Metuchen, New Jersey.

FOR SALE—model CR-65 Larkin Humi-Temp diffusers. 2,960 B.t.u. at 16° TD. Lots 1 to 6, $35.00 each. 6 to 25, $31.50 each. Over 25, $29.50 each. FLEETWOOD-AIRFLOW, INC., Wilkes-Barre, Pa.

EIGHT TRAY ice cube maker. La Crosse #298, list price $158.50; packed two to crate, original crates, $48 each. Carrene gas, two 25 gallon sealed drums @ $50 per drum. Also quantity American Coils; 60-20% off list prices. Write for literature. NEW YORK REFRIGERATION CO., 35 East 4th Street, New York 3, N. Y.

SUBJECT TO prior sale: Hermetic Chieftain units—⅛ H. P., $44.50; ⅓ H. P., $48.50. Other well known hermetics: ⅓ H. P., fan cooled, $52.50; ¼ H. P., fan cooled, light duty, $57.50; ¼ H.P., fan cooled, heavy duty, $59.50; ⅓ H. P., fan cooled, $69.50. Open units, standard makes: ¼ H. P., $54.50; ⅓ H. P., $64.50; ½ H. P., $84.50. Above prices quoted on lots of six. All open units are 60 cycle, single phase. All above units new, carrying factory warranty. Write for unit list. Penn type 260 Apol low pressure control, $4.25. Penn type 262 Apol high pressure control, $4.25. Minneapolis-Honeywell dual pressure control, $4.50. Detroit Lubricator low pressure control, $4.25. G. E. blower fan motor with 10" fan, $4.50. Superior heat exchanger, 13" over-all, ⅜" x ⅝", $4.75. Mueller heat exchanger, 14½" over-all, ⅜" x ⅝", $5.00. Kramer Trenton panel blower complete, ½ ton, $30.00. Superior master drier ¼" flare x 1¼" x 5½", 75¢. U. S. "Freon" gauge, 4½" face, 30" vac., 150# or 300#, with corresponding temp. scale with red warning hand and mounting holes, $4.50. Scientific Instrument Co. dial thermometer, 4½" face, minus 40 to plus 120, 5 ft. tube, $4.50. 1 set U. S. "Freon" gauge, 2½" face, 100# compound and 300# pressure, temp. scale, recal. and mounting holes, $3.50. Ranco type KW-412 cold control complete, $4.00. American Injector oil separator, ⅛ ton, $3.50. Cold plates: 1—30" x 55", 2—30" x 64", 3 to a set, $35.00. 6—5 lb. cans Davison refrigeration silica gel, $6.00. 1—5 lb. can Davison refrigeration silica gel, $1.10. Crouse-Hinds vapor proof refrigerator light, with guard, $2.50. WALTER W. STARR, 1207 George Street, Chicago 13, Illinois.

25% LESS THAN distributors cost on McQuay air conditioning lowside assemblies. Complete with housing, blower, motor, filters, cooling and heating coils. Can be purchased without heating coils. ST models in capacities from 5 to 30 ton. All new, crated. TALBERT-THOMAS COMPANY, 160 E. Grand Avenue, Chicago.

HERMETIC TERMINALS for Norge, Frigidaire, Westinghouse, Coldspot—$1.50 set of three; aluminum blades for Coldspot, 1", 1¼", 1½"—50¢ set of four; Weller soldering guns, 5 sec. heat, $9.72 ea.; Norge check valves, up to 1933—$1.00 ea.; after 1933 and with extracting tool—90¢ ea.; basket filters for Norge rolators—15¢ ea.; quick coupling charging hoses—$1.40 ea.; bearing knockout tools—$1.60 ea.; 1,700 ft. commercial gasket material, one lot 2¢ ft.; Hermetic unit test cords—$2.70 ea. BOX 164, Dumont, N. J.

LIQUID RECEIVERS (Weatherhead) for ½ H.P. condensing units, 250 pieces, all new at $2.50 each. Subject to prior sale. BOX 3010, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

MIAMI, FLORIDA—a leading refrigeration, air conditioning, television, and appliance sales and service establishment—in same Miami location ten years. Grossed $150,000 and netted $20,000 last year. Will sell for $7,500 to cover truck, equipment, and improvements plus merchandise inventory at cost—about $8,000. BOX 2992, Air Conditioning & Refrigeration News.

FOR SALE: well established commercial and household refrigeration sales and service business in Southern California in town of 35,000 population. Well equipped shop, good stock, good lease. Owner wants to retire. BOX 3005, Air Conditioning & Refrigeration News.

ESTABLISHED COMMERCIAL refrigeration and air conditioning sales, service and maintenance business, located in the heart of Manhattan, New York City. Fully equipped; large showroom and shop; excellent reputation; valuable franchises and maintenance contracts. Wonderful opportunity for ambitious party. Priced for quick sale. Owner has other interest. BOX 3021, Air Conditioning & Refrigeration News.

PARTNER WANTED—for established commercial and air conditioning business located in northern New Jersey city. Sales or mechanical experience and business ability just as essential as capital—real opportunity for either a sales engineer or service supervisor. Present owner can handle either end. BOX 3022, Air Conditioning & Refrigeration News.

MISCELLANEOUS

GIVE USED refrigerator shelves new look for greater profit and faster sales. Shelves refinished in gleaming white plastic over Bonderized zinc plate; carry one year guarantee. 48 hour service. $1.50 per shelf; ship parcel post or express to H. C. FISCHER & CO., 42461 Clemens Road, Plymouth, Michigan.

Subscribe Now

Receive the greatest trade paper in the Industry—AIR CONDITIONING & REFRIGERATION NEWS. Published every week. Brings you latest news and vital information on household refrigeration, commercial refrigeration, air conditioning, home freezers; manufacturing, distributing, retailing, servicing, and contracting. Only $5 per year, 52 issues.

Fill in coupon and mail today

AIR CONDITIONING & REFRIGERATION NEWS
450 West Fort Street, Detroit 26, Michigan

Gentlemen: Send the NEWS for one year.

☐ $5 enclosed ☐ Bill me ☐ Bill the company

Name.....

Company.....

Street.....

City.....Zone.....State.....

11-22-48

Refrigeration Problems and their Solution

by Paul Reed

For Service and Installation Engineers

Paul Reed

Absorption-Type Refrigeration (8)

MOISTURE REMOVED IN THE RECTIFIER

The rectifier (7) is simply a further step in removing the water vapor from the mixture of ammonia vapor and water vapor. In the rectifier, the mixture is cooled somewhat.

Since the condensation point of the water vapor is much higher than that of the ammonia vapor, the water vapor condenses and runs down the tube to the analyzer, and the ammonia vapor, at that temperature, still remains a vapor and passes on up to the condenser.

In the condenser coil (2a) ammonia vapor from the rectifier loses heat to the room air and condenses to a liquid anhydrous ammonia in the usual manner. From the condenser this liquid ammonia flows to the evaporator where it evaporates and diffuses into the hydrogen gas that has returned to the evaporator from the absorber, via the gas heat exchanger (8).

En route to the evaporator from the condenser, the liquid anhydrous ammonia passes through a liquid trap which keeps hydrogen gas from getting into the condenser and which also serves as a heat exchanger, in which the liquid ammonia from the condenser comes into contact with the cold ammonia vapor returning from the evaporator to the absorber. The liquid ammonia is thus "subcooled" and its efficiency is improved.

An upper section of the condenser (2b) takes some of the ammonia vapor and condenses it and feeds it through another liquid trap to the upper part of the evaporator (3a).

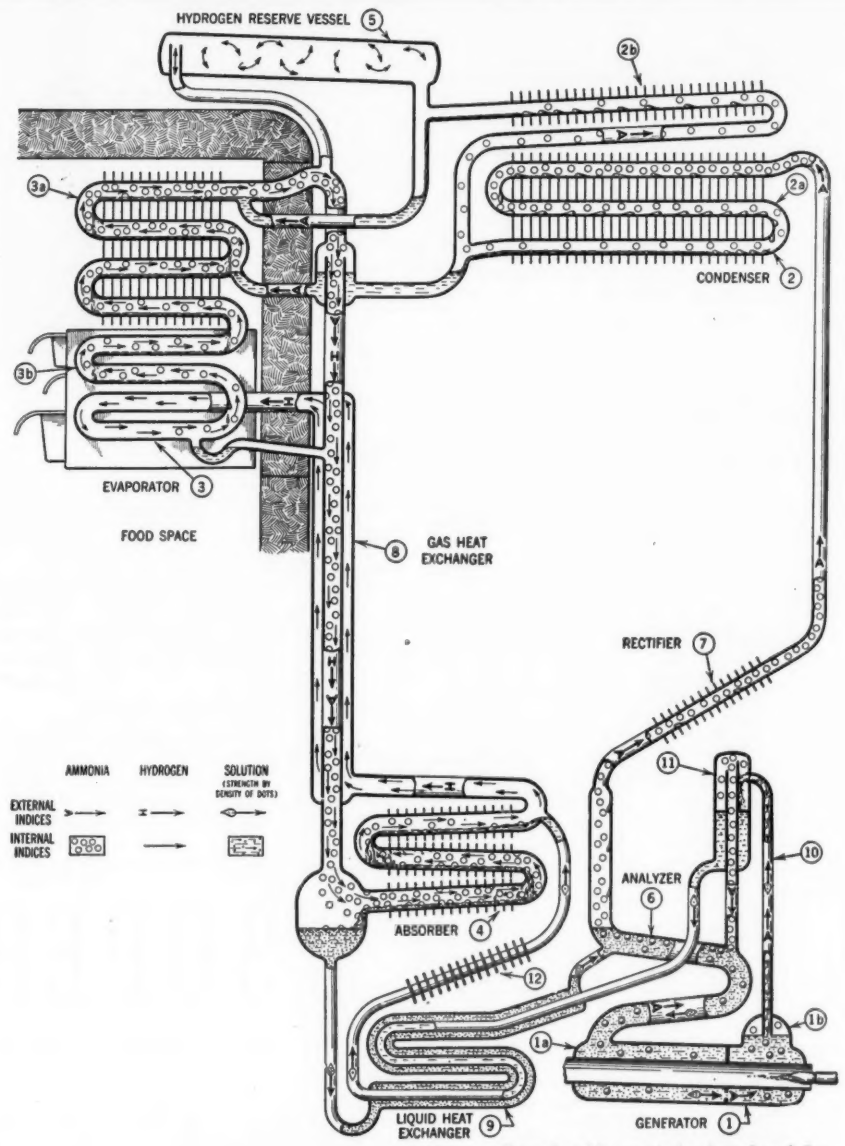
THE HYDROGEN RESERVE VESSEL

In cool weather, when the condenser is cool, the total pressure in the system could be very little greater than the saturation pressure of ammonia corresponding to the condensing temperature, if only a small hydrogen pressure were put in over and above the condensing pressure of the ammonia. In the evaporator the ammonia partial pressure is the total pressure less the hydrogen pressure.

In hot summer weather, the partial pressure of the ammonia in the condenser rises due to the warmer temperature of the condenser. If the hydrogen partial pressure were to remain the same, the total pressure must rise.

The partial pressure of the ammonia in the evaporator must also rise, and a rise of this pressure must automatically increase the temperature of the evaporator in accordance with the saturation pressure-temperature relation of ammonia.

This is, of course, undesirable, for it would allow the refrigerator temperature to rise, and would affect the rapidity with which ice cubes could be frozen. Moreover, it is undesirable to allow the partial pressure of the ammonia to rise too high in the summer, as this would reduce the efficiency and capacity of the system.



Reproduced by permission from Servel, Inc.

Fig. 3—Above shows a diagram of the Servel unit in action.

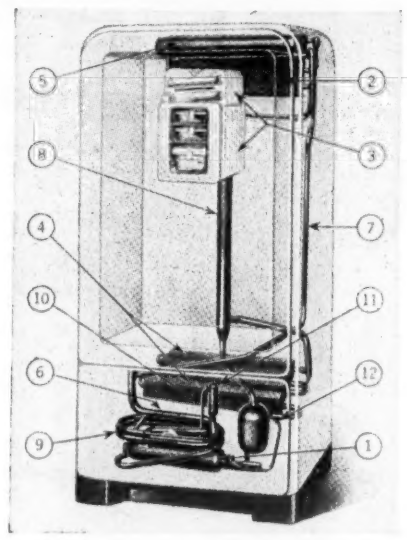
To prevent these undesirable conditions, a "hydrogen reserve vessel" (5) is provided, to hold a surplus or reserve of hydrogen during cool weather. Then, the partial pressure of the ammonia in the condenser is low, to the benefit of best efficiency.

If the room temperature rises, some of the ammonia vapor which is driven off by the higher condensing temperatures but is uncondensed, goes into the hydrogen reserve vessel. It there displaces and forces out some of the hydrogen, which, going into the rest of the system, raises the total pressure.

Raising the total pressure allows the partial pressure of the ammonia in the evaporator to remain about the same, even though the partial pressure has risen more than just the rise due to the increase in the partial pressure of the ammonia in the condenser. Also, the rise in total pressure permits proper condensation of the ammonia vapor even at the increased room temperature.

THERMOSTAT CHANGES FLAME SIZE

As will be seen in Fig. 3, the generator-analyzer is a tube-within-a-tube arrangement, placed horizontally, with the small gas flame also horizontal. The positioning of this flame and the adjustment of the burner as to amount of gas of various types and B.t.u. content, and the air mixture, is quite critical and must not be attempted without full knowledge and proper equipment.



Reproduced by permission from Servel, Inc.

Fig. 3-A—Is a phantom view of a Servel refrigerator showing the parts involved in the diagram.

In the small compression refrigerating system used in household refrigerators, temperature regulation, made necessary because of fluctuation of load, is obtained by a thermostat that starts and stops the electric motor. Thus, with the motor running, the full refrigeration capacity of the machine is obtained. If the thermostat stops the machine, the amount of refrigeration furnished drops from maximum to zero. There is little or no attempt to "modulate" the amount of refrigeration, that is, to vary the amount of refrigeration up or down, according to need, but not turn it completely off.

With the Servel absorption refrigerator, refrigeration is continuous. A thermostat is used but it does not turn the burner off entirely. If the refrigerator is cold enough the thermostat turns the burner down to "minimum flame" which is a low flame that keeps refrigeration going at a reduced rate,—just about enough to take care of heat leakage of the cabinet in cool weather.

If the refrigerator starts to warm up, the thermostat turns the burner back up from "minimum flame" to "maximum flame," and circulation within the system is speeded up, until the temperature in the refrigerator is cold enough to satisfy the thermostat, and the burner is again turned down to mimimum flame.

The gas burner is adaptable to artificial, natural, or LP (liquid petroleum,-bottled) gas. Also, the Servel absorption type refrigerator is made with a burner for using kerosene, instead of gas as the source of heat to the generator and analyzer. It, too, is thermostatically modulated.

TYPHOON
TYPHOON AIR CONDITIONING
SELF-CONTAINED UNITS
For More Profits in
Air Conditioning
Tie up with
TYPHOON
Sizes up to 7-tons
Product of over 30 years of experience
TYPHOON AIR CONDITIONING CO., INC.
Division of Ice Air Conditioning Co., Inc.
794 UNION STREET • BROOKLYN, N. Y.

Filtrine HIGH EFFICIENCY WATER FILTERS

TASTES AND ODORS VANISH

Filtrine Filters, in all applications, assure sparkling water — clean to the eye, stimulating to the palate, free of objectionable odors — the kind your customers expect from their coolers!

SELL A FILTRINE FILTER WITH EVERY COOLER ... A NATURAL PROFIT-MAKING TIE-IN!

Several choice areas available for manufacturers' representatives.

FILTRINE MANUFACTURING CO.
53 LEXINGTON AVE., BROOKLYN 5, N.Y.
Manufacturers of Coolers & Filters for over 40 Years

THE NEW FOGEL CONTINUOUS "OPEN-STYLE"
SELF-SERVICE FROZEN FOOD CASE
FROZEN FOODS
MODEL FCO-8
(Removable ends permit addition of new sections for continuous line of display)

Excitingly New . . .

DEALERS . . . FOOD MERCHANTS . . . SHOPPERS . . .

All, are talking about the *excitingly new* FOGEL Continuous "Open-Style" Self-Service Frozen Food Display Case. The case that increases sales and profits through *"Direct-Vision" (*scientific angle of display that offers full, unobstructed vision of the products being displayed).

Another FOGEL *"first"*, the FCO-8 is one of the greatest sales opportunities to hit the commercial refrigeration market in years.

CHECK THESE OUTSTANDING ADVANTAGES
√ Endless "Add-A-Section" Construction
√ Convenient "Finger-Tip" Shopping Height
√ Greater Display Area
√ Advanced, Streamlined Design
√ Beautiful Porcelain Finish
√ Fluorescent Interior Lights

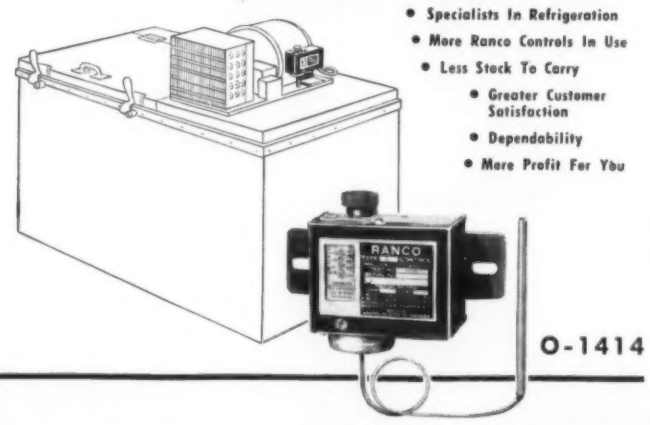
Write TODAY for full particulars concerning this amazing new case, or any item from the FOGEL line, *one of the most complete in the refrigeration industry.*

Fogel REFRIGERATOR COMPANY PHILA. PENNA.
FOGEL REFRIGERATOR COMPANY
5400 EADOM STREET • PHILADELPHIA 37, PA.
Quality manufacturers, for almost one-half century, of Display Cases, Reach-Ins, Walk-Ins, and Freezers.

Ranco CONTROLS FOR MILK COOLERS

For milk cooler applications, the Ranco Type O-1414, O-1477 and O-1514 controls provide a full range of units to meet the specialized requirements of this type of application. The O-1514, for Dual Temperature installations, and the O-1414 and O-1477, with cut-in range of 30 to 50 degrees and 25 to 45 degrees respectively, are available at your Ranco wholesaler . . . ask to see these precision-built refrigeration controls today.

CHECK with Ranco FIRST
• Specialists In Refrigeration
• More Ranco Controls In Use
• Less Stock To Carry
• Greater Customer Satisfaction
• Dependability
• More Profit For You



O-1414

Ranco Inc. COLUMBUS 1, OHIO
World's Largest Manufacturers of REFRIGERATION CONTROLS

ASRE Meeting December 6-8--

(Concluded from Page 1, Column 3)

The technical papers scheduled for the meeting will cover frozen food storage temperatures, design developments in household and small commercial refrigerators, and unusual refrigeration applications.

Three papers of general interest are to be presented on Monday morning, Dec. 6. Four papers on design topics are scheduled for Tuesday morning, three on applications Tuesday afternoon, and four on food preservation Wednesday morning.

The domestic refrigerator forum will be headed by G. K. Iwashita, chairman of the Evansville section of ASRE, and will be held on Tuesday. Engineers from various household refrigerator manufacturing companies are expected to engage in a full afternoon's roundtable discussion of restrictor tubes, shelf material, fabrication developments, and new finishes. The discussion is open to all refrigerating engineers.

The social program starts off on Sunday, Dec. 5, for ASRE Council members and section delegates scheduled to attend pre-meeting administrative sessions that day.

A musical concert in the Mellon Art Gallery and a sightseeing trip in the evening are slated for Sunday. An informal entertainment featuring drinks, dancing, and night club acts is booked for Monday evening. The society's annual cocktail party will end the social activities on Tuesday evening. The cocktail party will include cocktails, dinner, and dancing.

The tentative technical program, as released by C. M. Ashley, chairman of the national program committee, is as follows:

MONDAY MORNING

"Ultra Rapid Cooling and the Preservation of Life"—B. Luyet, St. Louis university.

"Dynamic Analysis of High Speed Compressor Valves"—E. S. Bishop, York Corp.

"Equilibria in 'Freon-12' Water Systems"—H. M. Elsey and L. C. Flowers, Westinghouse Electric Corp.

TUESDAY MORNING

"Inherent Motor Protection for Hermetically Sealed Compressors"—B. O. Haun, Spencer Thermostat Co.

"Pressure Drop with Change of Phase In Capillary Tube"—G. P. Marcy, Westinghouse Electric Corp.

"Theory and Use of Capillary Tube Expansion Device"—M. M. Bolstad and R. C. Jordan, University of Minnesota.

"Ideal Specifications for Absorbent-Refrigerant Combination"—R. M. Buffington, Servel, Inc.

TUESDAY AFTERNOON

"Low Temperature Brine Cycle Refrigeration"—representative of Carrier Corp.

"Further Tests on New Ice-Salt Mixtures for Railway Refrigerator Cars"—J. M. Carbert and W. H. Cook, Canadian National Research Laboratories.

"Economical Use of Condenser Water"—Leon Buehler, Jr., Creamery Package Mfg. Co., and A. P. Boehmer, University of Iowa.

Domestic Refrigerator Forum.

WEDNESDAY MORNING

"Storage Temperature as Related to Certain Characteristics of Frozen Pork"—J. L. Hall, June Kalen, B. D. Westerman, D. L. Mackintosh, and G. E. Vail, Kansas Agricultural Experiment Station.

"The Influence of Storage Temperatures on Frozen Foods"—J. G. Woodroof, Georgia Agricultural Experiment Station.

"The Effects of a Fluctuating Storage Temperature on Frozen Foods In the Range 0° to -10° F."—Andrew Hustrulid, J. D. Winter, and Isabel Noble, University of Minnesota.

"The Effect of Freezing Rate on Vegetables"—F. A. Lee and W. A. Gortner, New York State Agricultural Experiment Station.

Contractors--

(Concluded from Page 1, Column 3)

labor union officials is charged in the complaint filed with the NLRB.

Los Angeles NLRB officials say that these two cases are "test cases" which may break up a nationwide pattern of construction contractor-union collusion "against the public interest."

New Dealer In Broken Bow

BROKEN BOW, Neb.—The Farm and Home Appliance Store here has been organized to retail refrigerators and other appliances by Edwin N. Vanhouse of Omaha, Mike Vanhouse of Kearney, and W. A. Marie Hansen of Broken Bow. The firm has taken out a Nebraska charter with $10,000 capitalization.

Must Repair Sidewalk, But Can't Display Goods On It, Retailer Finds

VERSAILLES, Ky.—Just because a dealer can be required to construct and keep in repair the sidewalk in front of his store, he is not given a license to use it to display merchandise, the Minary-Allen Hardware & Paint Co. here learned recently.

The dealer had asked the state attorney general for a ruling on a city ordinance that would prohibit him from displaying his merchandise on the sidewalk. The company had been doing it for many years, he contended.

Assistant Attorney General Walter C. Herdman wrote the company, giving it as his opinion that the city had the right to pass such an ordinance.

Judge Dismisses Horton Patent Suit Against Thor

CHICAGO—A patent suit brought by the Horton Mfg. Co., ironer manufacturer, against Thor Corp. and counter claims by Thor against Horton were dismissed by stipulation by Federal Judge E. R. Shaw here recently.

Horton had asked that a U. S. Letters Patent re-issue and particularly certain claims in it be held invalid. Thor had asked damages and an accounting of profits from alleged infringement by Horton.

Ready for the Christmas Rush

To satisfy the holiday season demand, Philco has released two 1949 refrigerators — the Model 892 (shown) and the Model 893. The positive temperature control of this new 1949 Philco automatically regulates all temperatures in the various compartments of the refrigerator. The food arrangement demonstrates the flexibility of Philco's exclusive shelf control development.

* * *

Philco Models--

(Concluded from Page 1, Column 4)

sign Philco refrigerators, according to the company.

Other features offered in this model are a full-width freezer locker, crisper drawers, "easy-out" ice trays, unrefrigerated vegetable bin, trigger door latch, and new "King-Size" power system. Price: $329.50.

Cabinet design of model 892 features "new modern lines to harmonize with every kitchen decor."

The new, self-closing door latch which automatically pulls the door shut on contact, without slamming, and the finger-tip handle of plastic and chrome are among features. Others are a freezer locker, crisper drawers, covered meat storage drawer, and a new automatic, rubber floated, interior light with guard.

Price of model 892 was listed as $299.50.

A new all-purpose table model radio, model 101, operating on a.c./d.c. or batteries and particularly designed for farm and rural market, was also announced by Philco. Price: $42.50, less batteries.

Big Share of American Spending Dollar Seen Refrigeration's Objective for '49

FRENCH LICK, Ind. — The sales problem of the refrigeration industry in 1949 will be—to state it as simply as possible—to see that it gets its share of the monies spent by the American people.

So stated George S. Jones, Jr., vice president of Servel, Inc., and past president of the National Federation of Sales Executives, in addressing the joint meeting here of Refrigeration Equipment Manufacturers Association and Refrigeration Equipment Wholesalers Association.

"The experts say that in 1949 there will be as much buying power as in 1948, and when 60 million people are employed at wages as high as they are now the experts would seem to be on the right track," Jones declared.

"All the figures and predictions on our national income for the coming year indicates that there will be plenty of people with plenty of money to spend, and our problem is to get them to buy our goods."

One point that is becoming evident in market conditions generally, Jones declared, is that the buyer's market will not come at the same time to all industries in all sections of the country. It will vary even by different types of products in the same industry, he said.

Analyzing the market conditions by sections of the country, Jones pointed out that in the southeast and in farm areas generally the gains in business volume came about through increases in per capita income rather than through population increases and a "buying urge" always runs along with an increase in per capita income.

In California, on the other hand, the market potential increase has come about primarily through increases in population.

Commenting that all the discussion on "inventories" left him a little confused, Servel's vice president raised the question—

"Is an inventory an asset or a liability?

"This industry was built under the general condition of a buyer's market," Jones declared. "'Inventory' was a normal condition. We went out and got orders for what we had on our showroom floor."

One great fault of many salesmen today is that they are in effect "purchasing agents" who say to prospects "what do you want, and I'll see if I can get it for you," Jones asserted.

True selling, he said is the "utility of creating the desire to own," and without this utility having been adequately performed, many of our present great industries, including refrigeration, would not have grown.

Summing up the future prospects for the refrigeration industry Jones said these factors were self-evident:

The ability to buy the product is indisputable.

Industry's ability to supply the product is indisputable.

The job then for the industry's salesmen is to sell the industry's products to the prospects who have the purchasing power to buy them.

FOR SALE

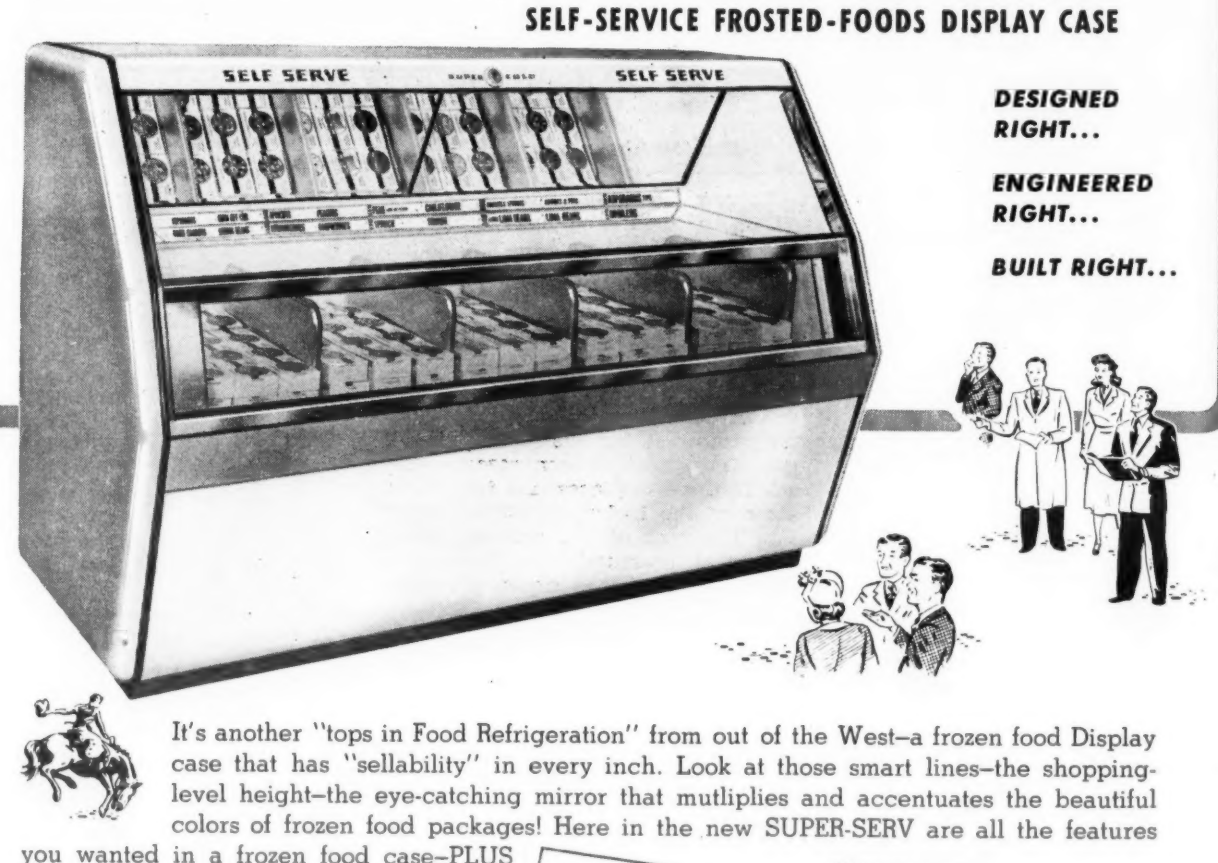
225 NEW CONDENSING UNITS

⅓ h.p. Hermetic, Medium Pressure Condensing Units. Designed for Beverage Coolers, Reach-In and Similar Applications.

United Iron & Metal Co. Inc.
Catherine Street & B & O RR
Baltimore 23, Md.

IT'S NEW! THE SUPER-SERV

SELF-SERVICE FROSTED-FOODS DISPLAY CASE



DESIGNED RIGHT...

ENGINEERED RIGHT...

BUILT RIGHT...

It's another "tops in Food Refrigeration" from out of the West–a frozen food Display case that has "sellability" in every inch. Look at those smart lines–the shopping-level height–the eye-catching mirror that mutliplies and accentuates the beautiful colors of frozen food packages! Here in the new SUPER-SERV are all the features you wanted in a frozen food case–PLUS labor saving design, divided well space to aid in food-type segregation, and easy in-line conversion for adding extra units.

Yes, this new case from out of the west has all the features to help you sell more with least effort.

THE SUPER-COLD CORP.

General Offices: 1020 E. 59th St., Los Angeles 54, Calif.
NEW YORK–NEWARK–NEW HAVEN–HOUSTON–DALLAS–OKLAHOMA CITY–PORTLAND–CHICAGO–PHILADELPHIA–NEW ORLEANS–TULSA
Distributors in all Principal Cities

NOTE: Inquiries from out of U. S. A. should be addressed to: International Division, or use Cable Address, "Supercold."

TO THE TRADE

The new SUPER-SERV is one of the many advanced designs which have been in Plans and Testing in our Los Angeles Plant since the war. It is symbolic of this fact: though the Super-Cold Corporation is over a quarter-century old and has pioneered major improvements in commercial refrigeration, which are now considered standard throughout the industry, WE ARE YOUTHFUL IN OUR OUTLOOK and WE'RE GOING PLACES! A part of our idea "in going places" has resulted in the most liberal franchise we have ever offered and a real opportunity for responsible, experienced dealers.

Why not write NOW for complete details about a SUPER-COLD Franchise. Just mail the convenient coupon below.

GET FULL INFORMATION ABOUT THE NEW SUPER-SERV BY SUPER-COLD NOW!

Send for free literature by mailing this coupon today, to:

The Super-Cold Corporation
1020 E. 59th Street, Los Angeles, Calif.

Name _____

Address _____

City _____ State _____

SUPER-COLD *Refrigeration*

GUARDIAN OF Flavor Appearance Purity

COMPLETE FOOD STORE REFRIGERATION UNDER ONE GREAT NAME